

CAPE OF GOOD HOPE.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH FOR THE COLONY

ON THE

PUBLIC HEALTH

AND ON THE

Government & State-Aided Hospitals of the Colony,

TOGETHER WITH

THE ANNUAL HEALTH REPORTS OF DISTRICT

SURGEONS AND LOCAL AUTHORITIES

FOR THE YEAR 1903.

Presented to both Houses of Parliament by Command of His Excellency the Governor
1904.

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REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY,

55 Parliament Street,
Cape Town, 21st May, 1904.

To the Honourable
The Colonial Secretary.

SIR,—I have the honour to present the following Report upon certain matters connected with the Public Health falling within the scope of the duties of the Medical Officer of Health for the Colony.

1.—INTRODUCTORY.

The Work of the Health Department.

The last Annual Report made by the Medical Officer of Health was as far back as the year 1896, which was issued during the time of my esteemed predecessor in the Office, Dr. George Turner, now Medical Officer of Health for the Transvaal. During the latter years of his incumbency he found himself unable, owing to press of work, to devote the time necessary to the compilation of Annual Reports, and since his departure in 1900, a like cause has operated against the making of a Report by myself, with the added circumstance of the existence of Plague in the Colony, which for some considerable period has absorbed a large portion of my time.

The inability to make these Reports has caused me great concern, and has, I fear, subjected the Medical Officer of Health, and through him, his Department, to much adverse criticism on the part of those unacquainted with the extent of the calls made by his work. In view of this effect, I think it may be desirable, while disclaiming any intention of magnifying its importance, to give some account of the scope of the work performed in his Office.

This work has been steadily growing without intermission year by year, and is the natural outcome both of the efforts made by the Department to improve the Sanitary Administration of the Colony, and of the awakening of Local Bodies and the Public generally to the prime importance of taking better measures for safeguarding the Public Health, together with the many attendant activities which such measures involve.

The work may be divided under two heads, that which is administered directly by the Medical Officer of Health, which he can initiate, and for which he is personally responsible, and that which is advisory in character, his advice being acted upon, or otherwise, by the Departments and those others seeking it.

(a) In the first of these categories, consisting of administrative and executive work, the following may be enumerated:—

Measures, both administrative and executive, for the suppression of Plague, including large cleansing and disinfecting operations and sanitary improvements.

The suppression of, and dealing with outbreaks of Small-pox.

The carrying out of Vaccination throughout the Colony.

The dealing with infectious diseases, in general, falling under the provisions of the Public Health Acts.

The investigation of outbreaks of disease.

The making of Inspections of and Reports on Sanitary Systems of Local Bodies and enquiry into cases of defective Sanitation.

The control and execution of all Port Health work.

The Administration of "The Immigration Act, 1902," including the preparation of the Annual Report thereon.

The Administration of "The Food and Drugs and Seeds Adulteration Act, 1890," including the preparation of the Annual Report on the subject.

The control of the Health and Sanitation of the Native Locations at Ndabeni, Maitland, and at New Brighton, Port Elizabeth, established under the provisions of the "Native Reserve Locations Act, 1902," including the Hospitals established in connection therewith.

Inspections of Hospitals and allied Institutions.

The performance of a large amount of Health Bacteriological work in the Laboratory attached to the Office.

The management of the Cape Town Morgue.

The recording, tabulation and dealing with Vital Statistics, and Statistics relating to Public Health.

The dealing with and approving of expenditure in connection with many of the above matters.

(b) Under the category of Advisory a number of more varied and complex matters are considered by the Government to come within the scope of the duties of the Medical Officer of Health. These consist of:—

Advising Government and Local Authorities on general matters relating to Public Health and Sanitation.

Advising on matters connected with the general administration of the Public Health Acts.

Advising on matters referred by the Government connected with the duties of District Surgeons. Although much of the work of these Officers is connected with Health, they are not in any respect under the jurisdiction of the Medical Officer of Health.

The revision and the affording of advice on all Regulations submitted by Local Bodies for the sanction of the Governor, so far as they relate to Sanitation and Public Health.

The drafting of Model Codes of Regulations under various Acts relating to matters of Health and Sanitation.

The drafting and revision of Bills, Public and Private, submitted to Parliament relating to matters of Local Government, Health and Sanitation.

Advising on and supervising the administration of "The Contagious Diseases Prevention Act, 1885."

The examination of and the affording of advice on proposed new schemes of Water Supply and Sewage Disposal, and other schemes relating to Sanitation and Health for which the sanction of the Minister is sought.

Affording advice on the administration of Hospitals and allied Institutions, including the construction of hospital buildings.

Advice concerning Lepers and Leprosy, including the investigation of all cases of Lepers and the making of recommendations to the Minister before warranting. Also their Medical examination from time to time after removal to Asylums for segregation, as well as advising on general matters of Health and Sanitation connected with Leper and other Asylums.

Acting as Advisory Medical Officer to the Department of Convict Stations and Prisons, including the issue of an Annual Health Report thereon.

Acting as Medical Adviser to the Civil Service Commission.

Acting as Medical Adviser in regard to a number of other matters, such as the establishment of Cemeteries ; interment and disinterment of bodies ; the consideration of Patents involving matters connected with Health. (Two such Patents contrary to the Public weal were successfully opposed by the Medical Officer of Health during the year) ; on Morgues ; regarding the Registration of Births and Deaths and the use of Statistics thereof ; and generally as casual Medical Adviser to all Departments of the Service including the Law Department and the Railway Department, on whose behalf a number of Enquiries have been held.

The amount of work entailed in the performance of the above duties is indicated by the fact that during the year 1903, 19,306 letters and 7,177 telegrams were received in or despatched from the Office ; while during the same period 1,193 subjects were referred to the Medical Officer of Health for report, and 98 large batches of Regulations were dealt with. This is, of course, only an indication of, and by no means represents, the actual work, as it takes no cognisance of the extent of the work which is done through the Telephone or on verbal instructions, nor does it take into account the many inspections and long and often intricate Reports and memoranda on technical subjects which have to be prepared.

Administrative Difficulties.

I think it will be admitted that this volume of work is greater than it can be expected of two Medical Officers to undertake and

supervise. The Professional Staff of the Office consists of the Medical Officer of Health for the Colony ; the Assistant Medical Officer of Health for the Colony ; a Bacteriological Assistant ; and a Medical Inspector. The time of the Bacteriological Assistant is, of course, absorbed in the performance of Bacteriological investigations ; and from the date of his first appointment the whole time of the Medical Inspector has been practically devoted to Plague work at Port Elizabeth, at which place Dr. Rees, the Officer holding the appointment, has been for some years past stationed, in the capacity of Senior Plague Medical Officer ; moreover, for a period covering in the aggregate five months during the year 1903, the Assistant Medical Officer of Health for the Colony, Dr. Mitchell, was absent from Cape Town in the performance of inspectorial and other important and unavoidable duty.

Under such circumstances it is clear that, in spite of most strenuous labour, the work of the Office was bound to fall into arrear, and especially that portion of it, such as the making of Annual Reports and matters of a like kind, which could be postponed ; for it will be readily appreciated that it is impossible to put on one side urgent practical matters, calling for immediate action, such, for example, as an outbreak of Plague, or the arrival of a vessel with infectious disease on board, in order to sit down and write an Annual Report, which after all is only of academic value.

It has been my unpleasant duty to represent on many occasions these difficulties to Ministers, and I am happy to say that the Government has now recognised the difficulties under which the Office has laboured and has made provision on the Estimates for the Financial Year 1904-1905 for an Additional Assistant Medical Officer of Health. With this it is hoped that it may be possible to keep abreast of the work.

Unfortunately, the Medical Officer labours under some Departmental difficulty in the performance and arrangement of his work, owing to the indefiniteness of his official position. While, nominally, he is officially regarded as being purely an Advisory Officer, he is, in fact, of necessity largely an Administrative and, to some extent, an Executive Officer. In these capacities he has to control a Sub-Department which has no official existence. Much of the work is, therefore, performed under grave administrative difficulties resulting from imperfect powers and an ill-defined official position.

This state of things is a consequence of the manner in which the Health Department has developed, through slow degrees, as an offshoot under a lay Head of the Ministerial Department to which it belongs, and I am of opinion that the time has arrived when, for the sake of satisfactory administration of the Public Health of the Colony, the position of the Health Department should be re-considered and placed on a proper basis by which the Medical Officer of Health would be in effective charge of a properly defined Sub-Department, as is the case in other South African Colonies.

Some Permanent Factors delaying the issue of an Annual Report.

There is a factor which has in the past and must always militate against the completion of a Report upon the Health and Vital Statistics of the Colony in time for presentation to Parliament during the period when the Session usually takes place. This is the impossibility of obtaining in time the classified results of the

Statistics of Births and Deaths registered during the preceding Calendar Year. These figures, which are furnished by the Registrar-General, cannot, as a rule, be made available until the lapse of some considerable time after the close of the year. For this reason I am, in the present Report, unable to furnish any information based on these Statistics, and the value of the Report is thereby much depreciated.

In any case, however, such figures cannot be made reliable use of without the possession of accurate returns of population. Owing to the long interval since the Census of 1891, it would, during the past few years, have been quite impossible to make any satisfactory report dealing with the Vital Statistics of the Colony. Careful records of the Births and Deaths occurring during these years have, however, been prepared and kept, so that as soon as the detailed results of the recent Census enumeration are known, it will become possible to present a Report, with reliable Tables, on the Birth Rates and the Mortality which have obtained in the Colony over a number of years. I intend, at no distant date, to furnish a Report on these matters for a complete decennial period, similarly as is done in the United Kingdom.

In the present Report I do not propose to deal with the intervening years since the date of the last Annual Report, but shall confine myself merely to a consideration of matters falling within the period of the Calendar Year ended on the 31st of December, 1903.

2. GENERAL SANITARY CONDITION OF THE COLONY.

Printed with this Report will be found the Annual Reports of District Surgeons and Urban Local Authorities of the Colony dealing with the Health and Sanitation of their respective Districts during the past year.

For many years it has been the custom to obtain these Reports and to print them for presentation to Parliament, and I am of opinion that on the whole their preparation and publication serve in some degree to direct attention to sanitary defects and to stimulate interest in sanitary improvement, yet I am bound to confess that they attract less notice than the importance of the subject they deal with deserves. Were they only read and digested by those responsible for the carrying out of local sanitation much valuable knowledge would be obtained of local conditions and of the almost universal need that exists for their improvement.

Indeed, a consideration of these Reports shews how extensively many of the most fundamental matters of Sanitation and the protection of the Public Health are neglected, chief among which are the protection of Water Supplies; the disposal of night-soil, and refuse; the control of Native Locations; the prevention of overcrowding; the sanitary regulation of buildings and dwellings; the supervision of slaughtering and the sale of food, and the suppression of infectious diseases.

Although attention is usually paid to other matters of Municipal concern, it is frequently to be noticed that questions of Health and Sanitation are neglected. I only know of two Local Authorities in the Colony which employ a Medical Officer devoting his whole time to the work of the District, namely, the Municipality of Cape Town and the Board of Health of Kimberley; and even the number of Local Authorities who retain the services of a

Medical Officer in merely a consulting capacity are few and can be numbered on the fingers. In many cases where such Officers are appointed, their position is purely a nominal one and their advice is rarely sought, and if sought is frequently neglected. Until every Urban Local Authority has the advice of a competent Medical Officer of Health, and acts on that advice, it is scarcely likely that any very great advance in the general sanitary condition of Urban areas in the Colony will take place.

The insufficient rating by Local Authorities for Health Purposes.

There is one great and abiding obstacle to the provision of proper sanitary measures, which is, the objection on the part of the community to the payment of sufficient rates for sanitary purposes. This is a difficulty which is usually greater the smaller the Local Authority, for in small communities Municipal activity is less developed and the relative cost of sanitation is necessarily increased. The Public seem to forget that good sanitation, like all other things, must be paid for; that if pure water is to be delivered to the dwelling house; if adequate means are to be taken for removing night-soil and refuse; if streets are to be kept clean; if the spread of infectious diseases is to be prevented; it can only be done by the expenditure of money, whether the work be carried out individually by the different householders or collectively by the community as a whole. Nevertheless, it is not unusual for the revenue of a not inconsiderable town to be so small as to be insufficient for carrying out any but the very minor duties of a Local Authority. Indeed, there are many Village Management Boards that possess no Revenue whatever, and a number of them have a Revenue merely ranging from £1 to £25 per annum. Obviously, sanitation in such areas is left entirely to individual enterprise.

Sanitary Condition of Prince Albert.

A very instructive, although perhaps an extreme, example of this state of things is to be observed in the case of the Municipality of Prince Albert. This Village has, according to the Census of this year, a population of 1,767 persons, consisting of 1,021 Europeans and 746 Coloured. The rateable value, according to the Statistical Register, amounts to £106,335, and the rate levied was One Penny in the Pound. Its Revenue, however, from all sources during the year 1903 was only £276 and its Expenditure but £247. As to the sanitary condition of the Municipality I need only invite attention to the Report of the District Surgeon for the year 1903, which will be found printed at Pages 117—119. *Inter alia* he says "The Water Supply is derived from springs at the top of the Swartberg, and at its source is plentiful and of excellent quality. In its passage to and through the village it is so polluted as to be absolutely unfit for drinking purposes unless previously boiled. During the year one dead decomposing ox and the body of one coloured boy have been taken out of the drinking water near the village. Whenever it rains large quantities of filth-laden matter are washed into the furrow." "Slop water is not dealt with and is generally thrown into the back yards. The disposal of household refuse is also unsatisfactory, it being left to each householder to make his own arrangements."

“There are many overcrowded dwellings, especially in the Native quarter, and many unfit for human habitation.” “The manner in which cattle, swine and other animals are kept is disgraceful.” “There is no Native Location, the Natives being scattered over the Village, the largest number being above and close to the water furrow. They ought to be removed to the other side of the Village. The Camp is as filthy as it can be. Some of the huts are not fit for swine.” “Nothing has been done in the way of improving the drinking water. The condition of the Streets is disgraceful in the extreme.” “A number of Street lamps, fully equipped, have been presented to the Municipality by public subscription, but they are never lighted, the Municipality refusing to supply the oil.”

The most common Sanitary Defects.

That the state of Prince Albert is not altogether exceptional, will be seen if reference be made to the many Reports of District Surgeons. There are, indeed, very few towns in which the sanitary condition is entirely satisfactory or could not be improved. I do not propose here to enter into detailed description of these sanitary defects, nor to describe the steps which should be taken for improvement. These are matters which must be dealt with each case on its merits, and is scarcely a subject for general report. I may, however, point out that by far the most frequent and important sanitary defect is the neglect to provide a proper Water Supply. In numbers of towns throughout the Colony we find the Water Supply, although good and pure at the source from which it is taken, polluted before it reaches the consumer, owing to it being conveyed to the Town in open furrows to which all sorts of filth and contamination find access.

Another frequent defect, but not perhaps of such far reaching consequences, is the absence of proper systems of night-soil and slop water disposal. In numbers of Urban areas these matters are left to the individual householder to arrange for as best he can. In many other cases the Local Authority confines itself to the appointment of an authorised Stercus Contractor, whose operations it does not even trouble itself to supervise. I am aware that the collection and disposal of night-soil and slop water forms one of the most difficult sanitary problems that up-country Local Authorities have to face, but, on the other hand, there is no question that many Local Authorities do not do the best they can in these matters.

The unhealthy conditions under which Natives and Coloured persons are permitted in many cases to live within the area of the Local Authority is another subject calling for attention. Until Locations are properly controlled and the conditions altered under which such persons are allowed to herd together in unhealthy dwellings, and until proper Water Supplies are provided, the appalling mortality at present occurring amongst the Coloured Urban populations of this Colony, and especially among infants, must continue.

But after all the apathy of the Local Authority is in a large measure but a reflex of the apathy of the individual to the importance of sanitation and cleanly living. It is, indeed, a fact that the general standard of domestic hygiene is in South Africa far inferior to that observed in Holland and Great Britain from which the majority of the white inhabitants of this Continent are

derived. Whether it is due to the enervating influence of the climate, to a deficiency of water, or to the insufficiency and inferiority of the domestic labour supply, or to all of these, the fact remains that the standard of cleanliness and of clean doing is extremely low in the average South African Home.

The Government Powerless to Intervene.

It is regrettable that the Government is not endowed with proper powers for the supervision and control of Local Authorities. At the present time such control as can be exercised is solely dependent on moral influence and tactful persuasion.

Under the Public Health Amendment Act of 1897 certain very limited powers are given to the Minister under Sections 7 and 8, which provide that every Urban Local Authority shall make Regulations for the suppression of Nuisances; for the keeping of premises free from offensive, infectious or unwholesome matters; for the protection of drinking water and for the killing of animals and the sale of Butchers' meat; and in the event of such Regulations not being framed by a Local Authority, the Governor may, after four months' notice to the Local Authority, himself put in force such Regulations in its District. Furthermore, in the event of any Local Authority failing to carry out such Regulations when put in force, the Governor may, himself, proceed to enforce or carry them out or authorise some person to take the necessary steps for that purpose, but in so doing the Governor may not expend a sum exceeding one fourth the amount of the Revenue of the Local Authority derived from rates of the preceding year, and in no case a sum exceeding £100 in any one year. It will be readily understood such powers as these are practically of little avail.

A complete set of Model Regulations dealing fully with the subjects falling within Section 7 have been drafted by the Medical Officer of Health for the Colony and adopted officially by the Government as Model Regulations under that Section. These were issued to all Urban Local Authorities in the Colony under cover of an official Circular No. 22 of 1899, in which Local Authorities were urged by the Minister to adopt them. At the present time, after the lapse of five years, and in spite of steady and continuous effort on the part of the Government to cause them to be adopted, they have been accepted by only 63 Municipalities and 13 Village Management Boards, out of a total of 106 Municipalities and 83 Village Boards in the Colony.

Among the important Municipalities which have adopted the Regulations I may mention the following:—

East London, Kimberley, King William's Town, Port Elizabeth, Queenstown, Uitenhage and Worcester.

and among Municipalities who have hitherto failed to adopt them, may be mentioned Oudtshoorn, Paarl and Cape Town; all other Municipalities of the Peninsula, excepting Wynberg, Rondebosch and Mowbray, have adopted them.

The Regulations themselves have proved reasonable in their provisions and effective in their working, and in no single instance has any Local Authority that has adopted them, experienced any difficulty in their application.

The provisions regarding the compulsory carrying out of any of these measures at the expense of the Local Authority has never yet been acted upon by the Government.

Amended Public Health Act Necessary.

The present Public Health Amendment Act of 1897 was the outcome of a complete and effective measure introduced to Parliament in the year 1894, this Bill having, during the three subsequent years' consideration given to it, been shorn of most of its effective provisions.

I am very strongly of opinion that better Health Legislation should be enacted, and I think that when the question of amended Municipal Legislation is under consideration, which I understand is to be the case during the next Session of Parliament, the opportunity should be taken at the same time to introduce an amended Public Health Bill, and thus to differentiate, consolidate and improve the Laws relating to both subjects. Under the present laws much overlapping and confusion exists, owing to many purely Health matters being provided for in a variety of ways under the different Municipal Acts, while, on the other hand, some matters of merely Municipal concern are dealt with under the Health Act.

In any amended Health Act, defined powers should be given to the Medical Officer of Health, and adequate powers should be given to the Central Government, in order to ensure the proper carrying out of all sanitary measures by Local Bodies. It is, indeed, a matter for consideration whether the time has not arrived for the establishment of a properly constituted Local Government Board, which in dealing with the public can act with greater independence and weight than can any single minister.

No Act will be satisfactory that does not provide for a measure of sanitary control over Rural Areas. At the present moment none such exists, with the consequence that great harm has frequently resulted to the Public Health. Had such powers existed it would have been impossible for such deplorably and irremediably insanitary communities as those of "West London," in the Cape Peninsula and "Korsten," in the vicinity of Port Elizabeth ever to have arisen.

3. MUNICIPAL AND HEALTH REGULATIONS.

During the Year a large number of Municipal and other Regulations have been dealt with, 98 batches having been referred to the Medical Officer for report in connection with their relation to Sanitation and Public Health. Many of these batches were of considerable size running into several hundreds of long Regulations. This is a most important work, but entails a very large measure of time to adequately perform. Many years ago Municipal and other Regulations were sanctioned by the Governor with practically no previous examination by Expert Officers, with the result that numbers of Regulations have been promulgated throughout the Colony which are either bad in the nature of their provisions, unnecessary or redundant as being already provided by existing Law, contradictory in their Clauses, or often entirely *ultra vires*. At the present time, mainly as a result of the efforts of the Medical Officer in years past, all Regulations submitted to the Governor for sanction are carefully considered by the Government Experts dealing with the special matters included in such Regulations. In this manner all Regulations which affect Sanitation and Public Health are considered by the Medical Officer of Health. Inasmuch, however, as these matters form a large proportion of the subjects dealt with by such Regulations, and are often directly affected by Regulations on other

matters, it follows that consideration in this regard has to be given to most of the Bye-Laws submitted for sanction by Local Authorities. This work, owing to the time it involves, has generally had to be performed by the Officials of this Office in their own time, after office hours ; in view of this and of the smallness of the Staff, and the pressure of other work, delays in dealing with Regulations have occurred and have been unavoidable. I am, therefore, afraid that our efforts to place Public Health and Sanitary Local Legislation on a satisfactory and workable basis has not met with general approval. I can, however, unhesitatingly say that these efforts have resulted in solid benefit to the Colony.

Absence of Uniformity in Bye-Laws throughout the Colony.

One point of importance has for long past been kept steadily in view by the Department, which is the introduction, as far as possible, of uniformity throughout the Colony in Health and Sanitary Legislation. Formerly the most divergent Regulations were passed on similar subjects in different parts of the country, not only on Sanitary questions, but on nearly all subjects of Municipal control. With the object of remedying this anomaly, it has been our practice to, whenever possible, bring Regulations on certain subjects into accord by the preparation and submission to the Local Authority of Model Bye-Laws. In this way a complete set of Model Bye-Laws were framed some years ago dealing with the Sanitary matters provided for under the provisions of Section 7 of the Public Health Amendment Act, 1897, and as already mentioned, these Regulations have been adopted in their entirety by a very large number of the Local Authorities throughout the Colony. Also Regulations on the subject of Overcrowding have similarly been prepared and are in force in many places. In addition to these we have drafted during the year a comprehensive set of Dairy and Milk Regulations under the provisions of the Dairy Act, 5 of 1890, and similarly, sets of Regulations dealing with the Sale of Fruit and Vegetables and Articles intended for the Food of Man, with the Control of Bakehouses, regarding the Preparation and Sale of Icecream and the Products of Milk and for regulating the Removal and Disposal of Night Soil, Refuse and Slop Water have been under preparation and have since been completed.

It is hoped that, as time goes on, all matters at present falling under the provisions of the Public Health Amendment Act will be dealt with by Codes of Model Regulations, alternative Regulations being provided in respect of those matters which require a certain amount of difference of treatment in different localities.

4. SMALL-POX AND DISEASES RESEMBLING SMALL-POX.

Responsibility for Expenditure.

Prior to the 1st of April, 1902, administrative responsibility in connection with outbreaks of infectious disease, including Small-pox, rested with the Local Government and Health Branch of the Colonial Secretary's Department, the duties of the Medical Officer of Health in regard thereto being of a purely advisory nature. Since that date, the Medical Officer of Health has been virtually placed in direct administrative charge of such

matters, all communications in regard thereto being made direct to him—a procedure which has obviated the delays inseparable from the system previously in force.

Moreover, from the 1st January, 1903, the Medical Officer of Health was authorised by the Minister to incur and to authorise expenditure under certain Votes for Small-pox, Public Vaccination, Bubonic Plague, Infectious Diseases, Quarantine and Port Health Work.

This expenditure is considerable in amount, including as it does the contributions made by Government to Local Authorities in respect of expenditure incurred by them in dealing with diseases falling under the provisions of the 38th Section of “The Public Health Amendment Act, 1897.”

I must here direct attention to the unsatisfactory principle involved in these payments. By the above-mentioned Section it is provided that the Governor shall pay out of the Public Treasury four-fifths, and under certain conditions, the whole of any expenditure satisfactorily incurred by a Local Authority in dealing with Small-pox, Cholera, Diphtheria, Typhus, Yellow Fever, and Bubonic Plague. In practice this means—whatever in theory the safeguards may be—that the Local Authority has the spending of large sums of money without any direct responsibility for their action, which expenditure has subsequently to be defrayed by the Government without adequate means of controlling it. Such a system is bad. However resolved Local Authorities may be to exercise economy, or determined the Government may be to resist extravagance, no proper control of Public Expenditure can be maintained under such conditions, and as a fact I can say, after a long experience of the working of the system, that it results in the annual waste of large sums of public money.

Small-pox in the Colony Proper.

At the beginning of 1903, outbreaks of Small-pox were still in progress in the following Districts:—Cape (including the Sub-District of Durbanville), Malmesbury, Port Elizabeth, Humansdorp, Herschel, Aberdeen, Victoria East, and Victoria West. During the first quarter of the year a considerable dissemination of the disease took place and extensive outbreaks occurred in the Cape, Port Elizabeth, Jansenville, and other Districts. The latter part of the year was marked, generally speaking, by a gradual subsidence of the disease, in accordance with the usual seasonal variation of its epidemicity in this country; a notable exception, however, being Uitenhage, where an extensive outbreak occurred during the second and third quarters of the year.

In the Cape Peninsula.

The outbreak in the Cape District had reached its height during October of 1902, but sporadic cases of the disease continued to crop up in Cape Town and in various parts of the District throughout 1903; in no case, however, did any extensive outbreak take place. The total number of cases occurring in the District during the year was 87, of which 57 occurred in Cape Town, four of the latter being, however, cases of Small-pox landed from shipping; only 15 of the cases were Europeans. No case of death from Small-pox occurred. All cases discovered in the District were isolated and treated in the Small-pox Hospital of the Cape Town Municipality at Rentzkie's Farm, the charges made by the Cape Town Municipal Council to other Local Authorities being at the rate of £3 for removing each case and 19s. per patient per day for maintenance when the number of patients under treatment in the Hospital is five or less. When the number is over five but less than twelve a reduction of 10 per cent. is

allowed; when the number exceeds twelve a special reduced rate is charged, which varies according to the number under treatment. The last case of Small-pox was discharged from this Hospital on 23rd January, 1904.

During December of 1902 cases of Small-pox had occurred in the Malmesbury District, and no less than thirty separate outbreaks followed in this District during the course of 1903, the total number of cases being 114, of which 9 were Europeans; none of the cases proved fatal. During the first quarter of the year a severe outbreak occurred in Worcester Town and District, the infection having been, in all probability, derived, in the first instance, from the Cape. The total number of cases occurring within the limits of the Municipality was 66, and in the area of the Divisional Council, 35; all of the cases in the Town were coloured, but 5 of those persons attacked in the rural area were Europeans. None of the cases proved fatal.

In Port Elizabeth.

During November, 1902, an outbreak of Small-pox was discovered in Port Elizabeth. Notwithstanding the efforts made by the Local Authorities concerned, assisted by the Government Plague Administration, the disease spread rapidly, and during the early part of 1903 the epidemic assumed considerable proportions and was not finally stamped out until November of that year. This was due to the difficulty of getting the community vaccinated. As the Municipal Small-pox Hospital was in the occupation of the Plague Administration, the isolation and treatment of cases was taken over by that Administration, the old Military Hospital adjoining the Small-pox Hospital, and which had recently been acquired by the Council, being utilised for the separate accommodation of the patients. The Officers of the Port Elizabeth Town Council carried out the removal to the Isolation Hospital, of all cases from the area, and also attended to the disinfection of infected premises. The total number of cases occurring in the Town and District was 140, including 33 Europeans, and the total number of deaths was 8, including 1 European. In view of the very large Native population in the Port Elizabeth District and the difficulties attending the prompt discovery of cases and the keeping under surveillance of persons who had been exposed to infection, great trouble was experienced in preventing the spread of the disease to other Districts, and, notwithstanding the measures taken, extensions of infection occurred to the Bathurst, Fort Beaufort, Humansdorp, King William's Town, Victoria East, and Willowmore Districts. These secondary foci of infection were, however, promptly discovered and effectively dealt with, so that none of the secondary outbreaks attained any serious proportions.

In Uitenhage.

During March, 1903, an outbreak occurred in Uitenhage, the believed source of infection being from the Jansenville District, in which, as already mentioned, Small-pox existed at the beginning of the year. The disease rapidly spread to the large Oatlands Native Location within the Municipal area, where a very serious outbreak took place. The total number of cases in the Town and District was 161, of which 11 were Europeans. The total number of deaths was 11, all the fatal cases being coloured. The last case of the disease was discharged from isolation on 31st August, 1903.

Extensions of the disease from Uitenhage occurred to the Alexandria and Humansdorp Districts, one such case occurring in the former and two in the latter District; no further extensions of the disease took place.

During the course of the year, outbreaks of Small-pox occurred in the Albert, Lady Grey, Barkly East, and Herschel Districts, infection being in each case traced to Basutoland, whilst in the Carnarvon, Colesberg, and Herschel Districts, outbreaks occurred in which the infection was traceable to the Orange River Colony.

With the exception of the four cases already referred to as having occurred on board shipping arriving at Cape Town, no cases were discovered to have entered the Colony from overseas. During the outbreak at Port Elizabeth a case occurred on board one of the vessels in the Bay, but the patient had, in all probability, been infected in the Town.

In the Colony Generally.

The total number of outbreaks taking place in the Colony Proper during the year was 332, involving 57 separate Districts or Magisterial Sub-Districts. The total number of discovered cases was 1,815, of which 457 had previously been vaccinated and 1,358 were unvaccinated. The total number of deaths was 70, 11 being of previously vaccinated and 59 of unvaccinated persons. The case mortality amongst the previously vaccinated was thus 2·41 per cent., and amongst the unvaccinated 4·34 per cent., the total average mortality being at the rate of 3·86 per cent. At the end of the year outbreaks were still in progress in the following Districts:—Hanover, Lady Grey, Malmesbury, Namaqualand, Paarl, Venterstad, and Victoria East.

In the Native Territories.

During the year, outbreaks of Small-pox were notified in twelve Districts of the Native Territories. In all cases, the disease was stamped out before the outbreak had attained any serious proportions, the only exception being in the case of Mount Currie, in which 107 cases occurred, of which 18 were Europeans, the number of fatal cases being 4, all of whom were Natives. The total number of cases discovered in the Native Territories during the year was 291, of which 18 were Europeans. The deaths amounted to 8; 6 being in unvaccinated and 2 in previously vaccinated persons. All the fatal cases were Natives. The case mortality in the unvaccinated was 3·17 per cent., and in the pre-vaccinated 1·96 per cent., the total mortality being at the rate of 2·75 per cent. At the end of the year the Native Territories were, so far as was known, free from the infection of Small-pox.

I attach hereto (Annexure "A") Returns showing particulars of all outbreaks occurring in the Colony Proper and Native Territories respectively during the year.

General Characteristics of the Disease.

The most notable feature of the outbreaks of Small-pox in the Colony during the year has been, as in recent years, the extraordinary mildness of the disease and the very low death-rate, even in unvaccinated persons. In European countries the death-rate from Small-pox in unvaccinated persons varies from about 15 per cent. in some outbreaks to 40 or 50 per cent. in others. Here, as has already been mentioned, the death-rate in such cases has been only about 4 per cent. A large percentage of the fatal cases were in very old or debilitated persons or in young and weakly children, and, in not a few instances, the immediate cause of death was some intercurrent complication. In most of the up-country Districts the disease is known as

“ Amaas ” or “ Kafir-pox,” and, mainly owing to its mildness, the opinion is held by some Medical Practitioners in these Districts that it is not Small-pox at all, but an altogether different disease. This question was fully investigated by my predecessor in office, and the results of his investigations were published in the Annual Report of the Medical Officer of Health for the Colony for the year 1895. Subsequent experience has tended strongly to confirm the conclusions at which Dr. Turner then arrived, namely, that the disease actually is Small-pox, probably modified in its virulence, in some way not as yet understood, by the climatic and other conditions prevailing in South Africa. The constitutional symptoms, even in unvaccinated subjects, are almost invariably characterised by a mildness very unusual in European countries. The primary fever is usually slight; the secondary fever is only feebly marked and, in a considerable percentage of the cases, the patient is not, during any stage of the disease, so ill as to be unfit for work. The eruption, although occasionally presenting some minor differences from the classical description of Small-pox, is usually fairly typical, and severe or semi-confluent cases are by no means uncommon. The relationship of the disease to Vaccination appears to be identical with that obtaining in the case of Small-pox in other countries. Information bearing upon this point was specially collected in connection with some 63 cases of the disease occurring in the area of the Cape Divisional Council, during the latter part of 1902, when it was found that among the infected households the *incidence* of the disease among the vaccinated, even in cases where the vaccination marks were faint or where vaccination had been performed many years before, was just under 6 per cent., whereas the incidence amongst the unvaccinated members was 56 per cent. Furthermore, in no case has the thorough vaccination or re-vaccination of the population of an infected locality ever failed to arrest the spread of the disease.

Moreover, if unvaccinated persons who are just convalescent, or have recently recovered from the disease, be vaccinated with Calf Lymph, no result as a rule is obtained, although a slight local reaction occurs in a small percentage of such cases. In these cases, however, vesicle formation appears to be distinctly exceptional, if, indeed, it ever occurs, the local reaction usually taking the form of a small, solid and raised mass of granulation tissue, apparently identical with the “ vaccinoids ” described by Hervieux. An exactly similar local reaction was obtained by vaccinating with Calf Lymph a case of Small-pox in a European seaman arriving in Cape Town from London in October, 1902.

There is one consideration which has suggested itself to me as a result of the somewhat divergent effects of vaccination obtained in this Colony as compared with the established teachings of English and other European Authorities. This is, the degree of protection afforded by Calf Lymph. Hitherto, English statistics of Vaccination have been based upon the experience of *Human* Lymph, whereas the whole of the recorded observations in this Colony are based upon the results of vaccination with *Calf* Lymph.

My impression is, that neither the degree nor the duration of the immunity afforded by Calf Lymph—at any rate that manufactured under the climatic and other conditions obtaining in this Colony—is so great as by Human Vaccine.

General Nature of Measures Taken.

The measures taken to prevent the spread of and to eradicate the disease may be categorically summed up as follows:—The isolation of patients; the taking of measures to ensure the prompt detection of fresh cases; the vaccination or re-vaccination of all contacts and of the general

population of the infected locality; the keeping of persons who have been exposed to infection under surveillance for a period of about 15 days, and the disinfection of all infected clothing, bedding or other articles, and of infected premises.

One of the greatest difficulties which have to be contended with in dealing with Small-pox in this country is that of ensuring the prompt discovery of outbreaks or of fresh cases, a difficulty which is, of course, greatest in the large rural areas having a considerable population of Natives, and in the Native Territories. Owing to the very general belief amongst Europeans that the disease chiefly affects only Natives and Coloured persons and is but slightly, if at all, infectious to Europeans, the latter not infrequently fail to report outbreaks among the Native and Coloured population which have come to their knowledge.

In several instances Medical Men have failed to recognise the true nature of the disease and to notify cases occurring in their practice, although the Law requires them not only to notify cases of Small-pox, but also cases of "diseases resembling Small-pox." An instance in point occurred at Port Nolloth, where an extensive outbreak took place during the latter part of 1903. The disease was diagnosed by the Acting District Surgeon—an Officer with only a very limited South African experience—first as "Epidemic Syphilis" and subsequently as "Damara Scurf," and it was only when the epidemic spread to Springbokfontein and Concordia that its true nature was recognised by the Medical Men practising there and its occurrence notified to Government.

Difficulties of Isolation.

A large number of the Urban Local Authorities have, up to the present, failed to provide proper isolation buildings for the accommodation and treatment of cases of Small-pox, so that when an outbreak occurs it is necessary either to erect temporary wood-and-iron structures or to accommodate patient under canvas, the latter plan being that usually resorted to. But in rural areas even this cannot, in the majority of cases, be done; and the plan usually followed is to collect the cases together, and accommodate them in one or more huts or dwellings, at a distance from others. The keeping of persons who have been exposed to infection under effective observation or surveillance is in most cases a matter of great difficulty, and it is therefore not infrequently necessary to place a certain measure of restriction on their movements. In the Colony Proper, the actual quarantining of healthy persons who have been exposed to Small-pox infection is not authorised by law, nor is it necessary; in the Native Territories, where Section 48 of the Public Health Amendment Act, No. 23 of 1897, is not in force, such quarantining, although it may legally be carried out, is very rarely effected, it being, as a rule, only possible to vaccinate or re-vaccinate all persons in the infected Location and to instruct the Headman and trust to him to see that no person leaves until the Location has been declared free from infection.

Vaccination the only Effective Check.

The principal and only reliable means of limiting the spread of and preventing Small-pox is by the vaccination and re-vaccination of *all* insufficiently protected persons in the infected locality. Under ordinary circumstances, responsibility for the enforcement of the Vaccination Laws and the carrying out of Public Vaccination rests with Government, but under Section 47 of Act 4 of 1883, when Small-pox is prevalent in any district,

the Local Authority is empowered to require any person within its limits to give proof that such person has been successfully vaccinated ; anyone failing to give such proof and refusing to allow himself to be vaccinated is liable, on conviction, to fine or imprisonment. These powers have been of the greatest service in dealing with outbreaks, but they are defective in that the Government has no power to see that they are acted on and moreover no provision is made for the enforcement of re-vaccination. In order to remedy these defects, advantage has been taken of the provisions of Section 15 of the Public Health Amendment Act No. 23 of 1897, which empowers the Minister in the case of urgent necessity arising from the prevalence or threatened outbreak in any District of any contagious or infectious disease mentioned in Section 38 of the same Act, to make and proclaim such Regulations to be in force within such District as may be required to prevent the outbreak or check the progress of or eradicate such disease. Under these powers a Regulation has been promulgated, when urgently necessary, empowering the Medical Officer of Health for the Colony or any person duly authorised thereto by the Minister, or the Local Authority, to require any person at the time being within the area in which the Regulation is in force to give satisfactory proof of successful vaccination or re-vaccination within the seven years immediately preceding the date of such requirement, and imposing penalties on any person failing to give such proof or refusing or failing to be so vaccinated or re-vaccinated.

5.—PUBLIC VACCINATION.

Since 1st April, 1902, the administration of the Law relating to vaccination and the control and direction of Public Vaccination throughout the Colony and Native Territories have rested with the Medical Officer of Health for the Colony. Prior to that date these duties were discharged by the Under Colonial Secretary.

I attach hereto (Annexure "A") Returns showing particulars of Public Vaccinations performed during 1903 in the different Districts of the Colony and Native Territories, respectively. According to these Returns, the total number of persons vaccinated in the Colony during the year was 81,438, and in the Native Territories, 37,664. It may, however, be explained that these Returns do not include vaccinations by private Medical Practitioners, whilst special Public Vaccinations by District Surgeons or other Government Vaccinators in connection with outbreaks of Small-pox are in many instances omitted. All Vaccine Lymph used during the year in connection with these vaccinations was prepared in the Government Bacteriological Institute, Graham's Town. As will be seen from the Returns, the results obtained from this Lymph have, on the whole, been very satisfactory.

General Condition of the Colony as regards Vaccination.

The manner in which Small-pox has been kept in check during the year, notwithstanding the difficulties which have had to be contended with, conclusively proves that, on the whole, the state of the population of the Colony and Native Territories as regards vaccination is fairly satisfactory, and that, except perhaps in the large Port Towns, where there is a considerable influx of unvaccinated population from overseas, there is but little risk of the occurrence of any very serious epidemic of the disease.

The Return, which will be found printed in Annexure "A," shows the total Public Vaccinations in the various Districts of the Colony and Native Territories during each of the years from 1894 to 1903, and the mean

average population of each during the Census period from 1891 to 1904. It is clear from the figures here given that not only has the primary vaccination of the general population been well carried out, but that a large percentage have been re-vaccinated.

Public Neglect of Vaccination.

Notwithstanding the fact that the results shown on the Return of Public Vaccinations during 1903 are, on the whole, satisfactory, the attendance at Centres in a considerable number of the Districts has been so good as might be expected. An instance of this is seen in the case of the Cape District, where only 835 vaccinations by the Public Vaccinator have been recorded. These were vaccinations by the Government Vaccine Officer, who attends daily at Cape Town, and on fixed dates at Sea Point, Woodstock, Mowbray, Rondebosch, Claremont, Wynberg and Diep River. In addition there were 512 vaccinations in connection with an outbreak of Small-pox at Mowbray. No doubt in this and other similarly circumstanced Districts, a large number of persons, and more especially children, have been vaccinated by private Medical Practitioners, of which vaccinations Government at present receives no notification. Owing to the absence of such notification and the want of a system of checking the Vaccination Returns with the Returns of Births and Deaths, the enforcement of the Vaccination Laws is attended with considerable difficulty. This matter has been very fully gone into and the advice of the Government Law Adviser obtained on certain doubtful points of law, with the result that it has been found impossible to introduce any such checking system under the existing enactments. I am of opinion that legal provision for the institution of such a system, at least in urban areas and in Districts such as the Cape, Port Elizabeth, East London, Kimberley and others where the administrative conditions approximate to those existing in European countries, should be made in any new Public Health Bill which may be introduced.

6.—ENTERIC FEVER.

Setting aside Tuberculosis, probably Enteric Fever is the most serious of the diseases, due to specific organisms that prevail in South Africa. This disease constitutes a veritable scourge in many parts of the Colony. To how large an extent it prevails it is difficult to say, inasmuch as, owing to defective notification, our records are incomplete, and, moreover, there is no doubt that large numbers of cases occur which are never diagnosed, or, indeed, ever come under observation.

Enteric Fever is essentially a disease of uncleanness and bad sanitation, and its prevalence is, therefore, a forcible indication of the extent to which these matters are neglected in this Colony. During the year 1903, many outbreaks of Typhoid occurred in many Districts of the Colony, in fact in all, with the exception of twenty. 1,785 cases were notified to the Medical Officer of Health under the provisions of the 29th Section of the Public Health Amendment Act. Of these, 1,131 were Europeans and 654 Coloured; this disproportion between Europeans and Coloured clearly indicates that cases among the latter are not being reported.

Mortality from the Disease

Unfortunately the Statistics of Deaths registered during the year 1903 are not yet available, but a consideration of those for the Calendar [G. 35—1904.]

Year 1902 will equally serve the purpose of showing the extent to which this disease prevails in the Colony.

During that year in the thirty-five chief towns of the Colony, the population, calculated on the basis of the last two Censuses, 1891 and 1904, was 388,875, of which 209,146 were Europeans and 179,729 were Natives and Coloured.

During the year, 343 deaths from Enteric occurred, 136 being among Europeans and 207 among Coloured. These figures give a rate of mortality of 6·50 per 10,000 for Europeans and 11·52 for Coloured, or of 8·82 per 10,000 for all races.

These figures may be compared with those obtaining in England and Wales, which, during the Decennial Period 1881—1890, amounted in the case of all "Fevers" to 2·35 per 10,000, the mortality for Enteric Fever alone being only 1·96 per 10,000.

Every case of Enteric Fever has its origin in some previous case of the disease, and the manner in which it is spread may be taken as being one or the other of the following:—

- (a) Contaminated water.
- (b) Contaminated milk.
- (c) Commencal infection of persons living in the same house, owing to want of care and cleanliness in dealing with the excreta and discharges from an infected person in the house.
- (d) From excreta and other infected matters conveyed by flies or dust.

Of these methods of spread, probably that of polluted water is the commonest. It is true that in this Colony we do not often see widespread outbreaks of the disease due to polluted water, but this may arise from the fact that in many communities a large percentage of the inhabitants have at some time of their lives suffered from this disease, so that a large portion of them must be more or less immunised against its invasion and able to withstand its attacks. For there are many places in the Colony, which, although small communities, are practically never without cases of the disease.

As instances illustrating the water-borne spread, I may allude to two typical outbreaks which have recently been the subject of investigation by the Department; one at Hanover and the other at Muizenberg.

Enteric Fever at Hanover.

The population of Hanover consists of 641 Europeans and 574 Coloured persons. It obtains its water-supply from a spring situated at some little distance from the Town, whence it is conveyed by a furrow to the upper end of the Village, a portion of the furrow being covered in, but not in such a manner as to prevent access of contamination.

The water at its source, both from an inspection of its surroundings and from bacteriological and chemical examination, appears to be pure. From a reference to the report of the District Surgeon for the year 1903 and printed on Page 54, it will be seen that at the time of making that report the District Surgeon had reason to doubt the purity of the water at the dipping basin at the furrow, whereat the inhabitants drew their supply, and he attributed to its use a very general outbreak of *Gastro Enteritis* which had occurred among them. So far, however, only a few sporadic cases of Enteric Fever had at that time occurred, but he stated that he expected a fairly general outbreak of the disease. Unfortunately this prediction was only too well fulfilled, with the result that since the commencement of the outbreak, on the 17th December, 1903, to the 4th of May, 1904,

no less than 90 cases of Enteric Fever have been notified to have occurred in this small community. As, however, 58 of these cases were Europeans and only 32 were Native and Coloured, it is probable that a number of cases among the latter Races have escaped discovery.

Dr. Thornton, the Medical Officer instructed by this Department to inquire into the origin of this outbreak, reported that the dipping basin from which the inhabitants drew their water-supply lies at the foot of a small kopje; that there was no Municipal system of night-soil removal, and that there was evidence that this kopje had been used as a dumping-ground for night-soil for some time past, and, indeed, at the moment of the Medical Inspector's visit, in March last, it was found that at least one family in whose house there had been undoubted cases of Typhoid, emptied their sanitary buckets in this neighbourhood. In the case of one of the families who were in the habit of so emptying their buckets, a case of Gastro-Enteritis, probably Typhoid, occurred early in December, 1903. The long drought from which the District had been suffering broke during the first week of December, and much debris was washed from the kopje into the dipping basin, infecting the water and with the result which has been shown.

Outbreak of Typhoid Fever at Muizenberg.

The outbreak of Enteric Fever which recently occurred in the Municipality of Kalk Bay is an equally good illustration of water contamination. Between the 21st of April and the 2nd of May, 19 cases of Enteric Fever suddenly occurred, scattered through the Municipality from Kalk Bay on the one side to Lakeside on the other, but chiefly at Muizenberg on the lower portion of its area. These cases developed within a few days of one another and one of them developed after the person had ceased, on the 14th April, to reside in the Municipality. On consideration of these dates, and the usual incubation period of the disease, it appeared clear that infection in all of them must have taken place about the 12th of April. An investigation of the milk supply of the patients entirely excluded this as a possible source of infection, this being derived from eleven different dairies.

This Municipality obtains its water-supply from a source in the mountains at some distance above the Municipality, and its purity as regards animal pollution is, on ordinary occasions, beyond reproach. It is, however, of dark colour owing to the presence of vegetable organic matter. A Storage Reservoir, formed by a dam built across the kloof, discharges into an open furrow some thousand yards long, which again empties into the intake pipe, which, after travelling a distance of over three miles, enters a Service Reservoir, from which a disturbing main is led.

It was owing to the brown colour of the water that, at the beginning of March, it was decided to empty the reservoir and clean it out by the removal of several feet of peaty material from its bottom. The water-supply was consequently, on 17th March, cut off from the reservoir, and water drawn from a neighbouring mountain spring was led into the intake pipe. The supply from this spring, however, proving at the time inadequate for the service of the higher portions of the Municipality, water from the bed of the reservoir was led into the pipes from the 24th to the 29th of March, and again on the 11th April. On the 7th, 8th, and 9th of April heavy rains occurred, which might be expected to wash any surface pollution into the furrow leading from the reservoir.

The reservoir having been emptied, a number of labourers had been employed in the work of digging it out, cleaning out the furrow and cutting away the reeds on its margin. Careful inquiry was made into the state

of health of these labourers, and it was found that a member of the gang, a Kafir labourer, was, on the 5th April, discharged owing to sickness. He had had Diarrhoea during the whole of the week previous on the mountain. He remained at home sick until the 25th April, and then feeling a little better he again attempted work on the 26th, but after an hour or two had to relinquish it as he felt too ill. This man, on examination, bore evidence of having suffered from Enteric Fever and he stated that, having no instructions in the matter, he had defæcated prior to his discharge from the works on the 5th of April among the reeds close to the furrow leading from the reservoir to the intake pipes. There is thus little doubt that infected excrement from this Kafir was washed into the furrow by the heavy rains on the 7th—9th April and found its way into the mains on the 11th April, when water was run through the furrow into the Service Reservoir; the result being the widespread but limited infection of the inhabitants on or about that date.

The reason for such a comparatively small number of persons being attacked was probably due to the small amount of infected material and the large volume of water with which it was mixed, being passed at once into the mains and distributed to the different houses, where it may be presumed that only small and scattered doses of the infection resulted.

Conveyance by Infected Milk.

As illustrating the conveyance of Typhoid Fever by Milk, the following two outbreaks which have come under investigation by this Department, are of interest.

Outbreak in Wale Street Police Barracks.

Between the 29th of July and the 22nd August, 1902, six, and probably seven, cases of Enteric Fever occurred at the Wale Street Police Barracks, Cape Town. The patients did not occupy the same dormitory, and in many cases the men only associated at meals. Three, and perhaps four, of the cases occurred almost simultaneously.

These Barracks are old, and the lighting and ventilation is, generally, far from satisfactory; the walls were damp and sore throats and catarrhal complaints were common among the men. The drains and water-closets were found satisfactory on investigation, except in the following respect:—The water-supply was led from the Municipal mains into tanks on the roof, and ventilating pipes from the drains opened immediately over the tanks, one of which was without a cover. The outbreak was, in the first instance, investigated by the Municipal Sanitary Authorities, who then concluded that the infection was carried by the drinking water, on the assumption that Typhoid Bacilli had gained access to the tank by passing from the drain up these ventilating pipes and into the water. One of the cases, however, stated that he drank no water in the Barracks. All of the patients consumed milk on the premises, which was discovered to have been obtained from a very filthy dairy situated at Maitland. Dr. Mitchell, who investigated the outbreak, found that the water-supply of this dairy was obtained from a shallow well, so situated as to render contamination from surrounding manure heaps and filth a foregone conclusion. It was found that the milk bottles were cleaned in the usual primitive manner common in South Africa, a Native boy half-filling them with water and then picking up a handful of sand and filth from the yard, which he shook round, afterwards rinsing out the bottle with the well water. The dairy utensils

were never scalded. Two samples of water from the well supplying the dairy were examined, and found to contain large numbers of Intestinal Bacilli, and on the 22nd August the milk obtained from the Police Barracks, delivered by this dairyman, was also on bacteriological examination found to contain enormous numbers of the *Bacillus Coli* (Escherich group). There was thus little doubt that the cause of the outbreak of Enteric Fever was due to the consumption of milk contaminated with infected water at the dairy. This view was subsequently borne out on tracing out the other customers of the dairy, when it was found that seven, and probably nine, other cases of Enteric Fever had occurred among these consumers.

Outbreak at Wynberg.

The other milk-borne outbreak which I will quote, is that which occurred at Wynberg in June, 1903. In the first week of June of this year there was a sudden increase in the number of Enteric cases reported by the Wynberg Municipality, and Dr. Robertson, of this Office, was thereupon deputed to make inquiry into the cause. He found that at least nine of the families in which cases had occurred, received their milk from one and the same dairy. On investigations being made it was brought to light that the milk from this dairy was distributed by two carts, in charge of two different persons, and that all the cases had occurred among the customers in the round of one of these carts. Furthermore, on inquiring of all the customers of this particular round, who amounted to a considerable number, it was found that only in those cases where unboiled milk was drunk *in quantity* were persons affected with Enteric; that is to say, those persons who only consumed boiled milk, or who only consumed unboiled milk in small quantities with tea or coffee, did not contract the disease.

On questioning the owner of the dairy he stoutly denied that anyone in his employ had ever suffered from Typhoid Fever, but admitted that his son, the distributor of the milk in the round which contained the Typhoid cases, had been in bed for more than a week suffering from a "kind of low fever" about ten days prior to the first cases in the round developing.

The general sanitary condition of the dairy, which was situate beyond the Municipal boundaries, was disgraceful, and in view of the probability of further cases of the disease being spread by the consumption of the milk therefrom, the Department took steps, under Section 26 of the Public Health Amendment Act, 1897, and lodged an information before the Magistrate at Wynberg, which resulted in the dairyman being called upon to show cause why an order should not be made requiring him to cease to supply any milk from his dairy. As he failed to do this, the Court ordered the dairy to be closed, and re-opening was not allowed to take place until satisfactory structural and other improvements had been carried out.

Other Methods of Spread.

Of the other two methods of infection, little need be said.

The commenal spread of Enteric Fever is exceedingly common in this country. It is rare to find an outbreak of the disease in which numbers of cases are not entirely the result of the spread of infection from one to another of the inmates of a house, owing to the absence of proper cleanliness and the failure to take adequate precautions. In both of the outbreaks I have alluded to above, at Hanover and Kalk Bay, this was the cause of the disease in a number of the later cases, and it is no uncommon thing for several of the members of a family to be attacked by the disease in succession by spread from one to the other.

An example of this form of spread is furnished by an outbreak of the disease which recently occurred at Mossel Bay, where a considerable number of cases occurred, in the majority of which the disease was spread directly from case to case, as many as six occurring in one household during a period of two months.

With regard to the propagation of the disease by means of infection carried by flies, or by the distribution of infected dust, it is in all such cases difficult to adduce definite proof of this method of origin, but it is the only way in which many of the sporadic cases occurring in this country can be accounted for; nor does such a method of spread present any difficulties, when it is remembered in how lax a manner Typhoid excreta are commonly disposed of in this Colony. I myself have seen young children playing about on the ground where stools of known cases of Typhoid had recently been lightly buried, and that Typhoid infection will remain virulent for long periods in a suitable soil has been proved. An excellent example of this occurred some years ago in the case of the Main Convict Station at Tokai, where a somewhat severe outbreak of Enteric Fever had taken place among the inmates, the Typhoid excreta having, as a matter of precaution, been buried by the Superintendent in trenches in a special portion of the grounds. A year later a new Superintendent came to the Station and, thinking to obtain some good manure for the garden ground, he caused these pits to be dug up and their contents spread on the land, with the result that several of the individuals working with this manure contracted the disease.

7.—DIPHTHERIA.

Diphtheria was very prevalent in the Colony during the year 1903, many outbreaks having occurred, and 1,249 cases having been notified under the provisions of the Public Health Amendment Act. Such notifications, it need scarcely be mentioned, by no means represent the entire number of persons affected. As a rule, only those cases coming under medical observation are notified, and such cases form but a small number of the persons actually affected. During the year 1902 there were recorded as having occurred in the thirty-five chief Towns of the Colony 202 deaths from this cause. Of these 79 were Europeans and 123 Coloured. These represented rates of mortality per 10,000 of the population of 3·78 for Europeans, 6·84 for Coloured, and 5·20 for all races. In England and Wales during the decennial period 1881—90, the mortality amounted to only 1·63 per 10,000.

This disease is particularly common in rural districts, and is largely connected with insanitary dwellings and surroundings, but there is no doubt that, once having commenced, it is spread to a large extent by persons, and especially children, from one case to another. Few people unacquainted with the facts can appreciate the ravages it not infrequently makes in a household. Instances have come under my notice in which an entire family has been attacked and four or five members of the household carried off with the disease.

As instances to which the extent of the disease spreads, I may briefly mention the following outbreaks. In the Town and District of Oudtshoorn there occurred during the year 1903 no less than 215 known cases of the disease, energetic measures having to be taken by the Local Authorities before the epidemic was arrested. Then also at Britstown, there was an outbreak reported in August, 1903. The epidemic had then gained a considerable hold on the District. In all, forty cases were known to have occurred, with four deaths. Diphtheria Anti-Toxin was supplied from

this office and proved most efficacious in preventing the spread of the disease. The District Surgeon reports that of twenty children who were in daily contact with others suffering from Diphtheria but received prophylactic injections of from 600 to 1,000 units, not a single one became infected. Another and more recent outbreak took place at Montagu, between 10th February and 30th April, 1904. In this little village, 34 cases of Diphtheria were reported. The disease was chiefly among school children and as a consequence the Public Schools were closed on my recommendation until the outbreak had ceased. From the report of the District Surgeon, strong suspicion attached to the sanitary condition of the Location as being in a measure responsible for the spread of the epidemic. The condition of this Native Location has been condemned by officials on the spot in the very strongest terms.

Much good has resulted by the issue by the Department of Anti-Diphtheritic Serum. This material is obtained from the Lister Institute, London, and has proved a most reliable anti-toxin. On the occurrence of an outbreak, supplies are sent to the Resident Magistrate who is authorised to issue it to Medical Practitioners on their making application, a charge being made to cover its actual cost in the case of all persons who are not actually paupers.

8. PLAGUE.

I do not propose in this place to give a complete history of Plague since its first appearance in the Colony some three and a half years ago. This is such a very large subject and one in regard to which our experience has been of so unique a kind, that it could not be adequately treated of in the short compass here available. I hope at a later period to present a full Report, dealing with the whole subject of Plague as it has come under our notice in the Colony.

No report, however, of the work of this Office would be complete without some account of the measures taken in respect of this disease.

Earlier Occurrences of Plague in South Africa.

Consequent upon the extraordinary spread during recent years of the disease in India and the Far East, infection had from time to time been carried by Shipping to many Ports of the World, and as a result an outbreak of Plague occurred in February, 1899, at Delagoa Bay, infection from this outbreak being carried as far as Middelburg in the Transvaal, both of which outbreaks I had the opportunity of investigating on behalf of the late Transvaal Government. Both these outbreaks were quickly suppressed, but in April, 1899, an outbreak occurred at Mochudi, in the Portuguese Territory, near Lourenco Marques. This outbreak was investigated by Dr. George Turner, my predecessor. The final results of this outbreak were never definitely known to this Government.

In May, 1900, an outbreak of Plague occurred at Durban, due to infection brought in some Indians' baggage from Mauritius. The disease did not spread beyond the case first attacked.

On 5th March, 1900, the S.S. "Kilburn" arrived in Table Bay with Plague on board. The presence of the disease was at once discovered, and the vessel sent to Saldanha Bay, where she was dealt with and the cases, amounting in all to five, treated.

On 24th October, 1900, an outbreak of the disease occurred at Izeli, near King William's Town. This outbreak commenced in the person of a Native who had been employed by the Military Authorities at the Remount Station at Modder River. Prompt measures were taken to deal

with it, so that, although 6 cases occurred in the immediate family of the original case, the disease did not spread to any serious extent. In this outbreak, 13 cases, all Natives, occurred, with four deaths.

At the time of this outbreak doubt was in some quarters cast upon the accuracy of the diagnosis, owing to the fact that the Colony was then believed to be free from Plague. Moreover, full enquiry of the Military Authorities at the Remount Station, where the original case had been working, failed to elicit any information leading to the suspicion of there having been previous cases. But viewing the matter in the light of subsequent experience, it is highly probable that infection had been conveyed to the Dépôt by infected forage or rats from Cape Town, which at that time was undoubtedly Plague-infected.

The Commencement of the present Invasion of the Colony.

On the 1st February, 1901, a dead rat was sent up to me from the Cape Town Docks. On examination this proved highly suspicious of Plague, and on making personal enquiries at the Docks I found that a mortality among rats had been noticed for a period of about six weeks by the Military Authorities, but not reported by them. This mortality occurred on the South Arm, which was then in possession of the Military Authorities and at which large quantities of forage and stores were landed and stacked.

On the 2nd February, a case of suspicious illness in a European who had been working as Clerk for the Military Authorities in a shed on the South Arm was reported to me. He was in the Hospital at Rondebosch, where he had been admitted on a diagnosis of Meningitis, subsequently altered to that of Enteric Fever. This man had a large bubo in his left groin, in the material removed from which I discovered organisms morphologically identical with the Plague bacillus.

Inoculation experiments, both from the rat and the man, were, of course, at once carried out, but these took some time to develop, the animals inoculated not dying until the tenth day after inoculation. These experiments, however, eventually scientifically demonstrated that the disease we had to deal with was Plague. In the meanwhile, however, taking into consideration the fact that mortality among rats had been observed; that the rat submitted to me, as well as a dead mouse on the following day, contained organisms microscopically identical with Plague; that the clinical symptoms of the human case, who had been working at the place where these rats were reported to be dying, were those of Plague, and that organisms microscopically identical with Plague were found in the bubo and his blood, I unhesitatingly came at once to the conclusion that we were dealing with an outbreak of Plague, and accordingly reported on the 4th February to that effect to the Government. My diagnosis was, however, received with a considerable amount of scepticism, and Dr. Edington, the Colonial Bacteriologist, was accordingly requested by the Government to investigate and report on the nature of the disease. This he did, reporting on the 11th February that, in his opinion, the disease among rodents was not Plague, but a new disease which might be of great service to the Indian Government in destroying rodents for the purpose of preventing the spread of Plague by these animals. Naturally, in view of these two conflicting opinions, the Government was in some doubt how to act, and, therefore, obtained from the Imperial Authorities the advice of Professor W. J. Simpson, who was at that time in South Africa on a Commission of Enquiry into Enteric Fever and Dysentery among the Troops. In the meanwhile, however, I was authorised to deal promptly with the outbreak on the basis that it was Plague, and this was done, a Plague

Hospital being established on the Forest Reserve ground at Maitland, to which the case above referred to and other cases which had begun to be discovered were immediately removed for treatment and isolation.

The diagnosis was eventually confirmed by Professor Simpson on the 19th February.

From this time onward the disease rapidly gathered force, and fresh centres of infection occurred throughout the Peninsula, sporadic cases being exported from Cape Town into one or two more or less distant parts of the Colony.

The Epizootic among Rodents in the Cape Peninsula.

Coincidentally with the spread of infection among human beings, the disease progressed among the rodents of the town. When the outbreak was first discovered there is no doubt that rats were widely infected throughout the Dock area and the portion of the town adjoining. There is reason, however, to believe that the rodents in the higher parts of the City were then practically free from infection, but by degrees evidence was forthcoming of the disease spreading among rodents in an ever widening circle, and with this there was proof of the almost total disappearance of rats in the portions of the districts first affected. Thus, as the outbreak progressed dead rodents were found high up in the residential portions of the town known as the Gardens, and to the westward throughout Sea Point, and especially in the Military Camps on the Green Point Common, and eastwards into Woodstock. It appears, however, tolerably certain that the epidemic did not spread among the rodents throughout the Suburban Municipalities in the Peninsula; no discovery of dead or sick rats being made or evidence of Plague among those trapped and killed in these areas being obtained.

At Simon's Town, however, a notable mortality took place in the Naval Dockyard and in other parts of the town, and here also a sharp outbreak occurred among human beings. It would seem, therefore, that the epidemic, or, in this case, the epizootic, skipped a considerable tract of country extending for about fifteen or twenty miles between Cape Town and Simon's Town. In what manner the disease was conveyed to Simon's Town there exists no evidence to shew.

Cessation of the Outbreak in the Cape Peninsula.

The outbreak virtually ceased, both among rodents and human beings towards the end of 1901, after a run of about eight months, although one or two dropping cases of Plague were discovered both in human beings and rats after that date; the last case in human beings occurred on the 2nd January, 1902, and the last Plague-infected rodent was found on the 19th of the same month.

During this time 766 cases were discovered, causing 371 deaths. Of these, 207, with 69 deaths, were Europeans; 380, with 216 deaths, Coloured; 157, with 70 deaths, Natives; 21, with 16 deaths, Asiatics; and one Chinaman, who recovered.

These cases were distributed through the Peninsula as follows:—

	Cases.
Cape Town Municipality	572
Green and Sea Point Municipality	9
Woodstock Municipality	69
Maitland Municipality	17
Palen and Riet Vlei	6
Tygerberg and Kuils River	6
(Both these are outlying places lying beyond Maitland, within the area of the Cape Divisional Council.)	
Mowbray Municipality... ..	5
Rondebosch Municipality	2
Claremont Municipality	10
Wynberg Municipality	7
Diep River	3
Downs No. 1, on the Cape Flats	41
Simon's Town Municipality	10
Total	757 Cases.

There also occurred the following exported cases, namely:—

Stellenbosch	1
Somerset West	5
Sir Lowry's Pass	1
Mafeking	2
Total	9 Cases.

During the course of the outbreak, 106,981 rats were reported to have been destroyed.

A large number of rodents were examined in the Laboratory of this Office, but in the hasty Plague Administration, got together at short notice, it was very difficult to ensure the making and preservation of correct records by the different temporary Officers concerned, and, therefore, we only have records of the following animals: 57 rats, 4 mice, 11 cats, 2 dogs, and 58 ferrets. A much larger number of rodents and other animals than the above were proved to be Plague-infected, but the results were not recorded.

In connection with the measures taken for the suppression of this outbreak, 599 cases were removed to the Plague Hospital for treatment, 5,383 Contacts were removed from their houses for observation and while their dwellings were being disinfected and dealt with; a still larger number of persons being evicted from infected dwellings, most of whom were provided with quarters by Government at specially erected Eviction Camps; 1,671 premises were cleansed and disinfected, apart from other and more general cleansing measures undertaken by the Government.

This outbreak, together with that at Port Elizabeth to be presently described, caused me very great concern owing to the weight of responsibility devolving upon me as the Administrative Officer in Charge, from the circumstances that much higher and important interests were involved than the mere protection of the Public Health, great as that duty is. For it was evident that unless the epidemic was kept in check difficulties might arise which would embarrass the Imperial Military Authorities. At the same time the exigencies of the War necessitated the abandonment of some measures which in a time of peace would have been taken.

Plague at Mafeking.

During the height of the outbreak at Cape Town a batch of twenty men of the North Lancashire Regiment, who had previously been quartered at the Castle, Cape Town, were despatched by train to Mafeking on 12th April, 1901. They arrived there on the 19th of the same month, and on arrival one of them was found to have developed Plague, the first symptoms of illness having occurred on the evening previous to his departure from Cape Town. The remaining members of the party were isolated and kept under observation, and eight days later, namely, on 27th April, a second case developed.

Both cases were mild and of the Bubonic type, and both terminated in recovery.

No further extension of the disease took place.

Plague at Imvani.

On 22nd May, 1901, a rat was found dead near the Stables in the Police Camp at Imvani. This was forwarded for examination to the Bacteriological Institute, Grahamstown, and was reported by Dr. Edington to be Plague-infected.

A special Plague Officer was immediately despatched to Imvani and a thorough investigation made as to the existence of infection amongst either the human or rodent population, but with entirely negative results.

About a month later, however—namely, on 30th June—a European Railway Ganger died suddenly and under suspicious circumstances, and on a *post-mortem* examination being made it was found that death had been due to Plague.

The source of infection in this case was never definitely traced. No evidence of the persistence of infection was found among the rodents in the Railway premises or vicinity. On the other hand, enquiries elicited the fact that a relative of the deceased, who had been at Green Point Camp, arrived at Imvani from Cape Town on the 16th June and had for some time stayed in the same house with the deceased.

The Outbreak of Plague at Port Elizabeth.

While the epidemic of Plague was in progress at Cape Town, an outbreak occurred at Port Elizabeth, several Plague-infected rodents being found in the Harbour Board area near some Military Forage, on the 12th April, 1901. Four days later a case of Plague in man was discovered.

From that day onward, Port Elizabeth has not been free from Plague either in man or rodents, except for several short intervals between the cessation of one outbreak and the commencement of another. In all 292 cases have occurred at Port Elizabeth, up to 31st March, 1904, with 162 deaths. Of these 53, with 18 deaths, were Europeans; 70 with 32 deaths, Coloured; 143, with 91 deaths, Natives; 17, with 15 deaths, Asiatics, and 9, with 6 deaths, Chinese (including one Japanese).

In connection with these cases 1,403 Contacts have been removed to the Contact Camp, while a very large number of persons were evicted from infected and insanitary dwellings.

Up to this date, also, 33,556 rats and 39,056 mice are recorded as having been destroyed in Port Elizabeth. Of these there have been found affected with Plague, 1,819 rats and 446 mice. Among other animals affected there have been eight cats and one dog. 2,080 premises have been cleaned and disinfected.

In connection with Plague operations in Port Elizabeth, a large number of most insanitary dwellings have been closed and subsequently demolished by the Municipality at the instance of the Plague Administration.

The outbreak of Plague here can be divided into a series of four periods, the first of these commencing on the 16th April, 1901, and ending on 8th January, 1902, having its maximum extent in August, during which twenty-four cases occurred. This was followed by an interval during which no cases were discovered, until the 25th March, 1902, when a second and slighter outbreak occurred, this ending about 8th July of the same year. During this period thirty cases were discovered.

This was followed by a time of quiescence until the end of January, during which one or two sporadic cases occurred in the middle of the period.

On 29th January, 1903, the third outbreak commenced, attaining its maximum between the end of February and the middle of April and gradually subsiding, so that from the beginning of July to the middle of October only a few dropping cases occurred. From 24th October, 1903, until 27th February, 1904, the town was perfectly free from human cases of Plague, with the exception of two cases discovered on January the 11th and 12th respectively.

On 5th March, 1904, however, the present outbreak commenced with an outburst of Plague among a number of individuals inhabiting the insanitary area known as Rudolph Street, which was found to be severely infected with Plague rodents. This outbreak is still continuing, although there is evidence to show that the virulence of the epidemic is abating, both in human beings and rodents.

Plague at Uitenhage.

During the outbreak of Plague at Port Elizabeth a case escaped from that place to Uitenhage, and was discovered on the 13th October, 1901. Prompt measures were taken and the disease did not spread.

Again, on the 23rd February, 1904, a sudden death occurred at Uitenhage, in a Native living in the Kabah Location, which proved to have been due to Plague. This death was immediately followed by three other cases, one man and two women, living in the same hut with the deceased and attending to him during his illness. The original case proved to have been a store boy employed at a store in Port Elizabeth at which Plague-infected rats were being found. Upon falling ill he left his work and went to his home at Uitenhage, with the results recorded. Although the necessity had been impressed upon the Owner of the Store to report to the Plague Authorities any illness occurring among his employés, this had not been done.

No further cases of the disease have occurred at Uitenhage, and so far as can be ascertained, the rats in the place have never become infected.

Plague at Mossel Bay.

On the 3rd December, 1901, Plague was discovered at Mossel Bay. It commenced by the sudden suspicious illness of two people and the death of one person. On this being reported to this Office investigations were made with the result that the diagnosis of Plague was established, and the Assistant Medical Officer of Health, Dr. Mitchell, was immediately despatched to the scene. Prompt measures were taken for the detection and isolation of cases among human beings and for dealing with rodents, which were found to be widely infected throughout the town.

The outbreak was finally subdued on 31st January, 1902, the last case of Plague having developed on that date, and the last Plague rodent being found on 25th February, 1902.

Since then, careful watch has been kept upon the town, but it has not become re-infected.

Plague at Ladismith.

From Mossel Bay two cases of Plague were exported to Ladismith, one being in the person of a European Merchant, who visited Mossel Bay in the course of his business, where he stayed for several days, spending a considerable part of his time at Wholesale Stores in the Town, which at that time were Plague rat-infected.

Prompt measures were taken and no spread of the disease took place.

Plague at Graaff-Reinet.

On 31st January, 1903, a suspicious mortality was reported to be occurring among the rats at Graaff-Reinet, which upon investigation proved to be due to Plague.

A reliable Disinfecting Officer was at once sent to the place, who undertook extensive cleansing and disinfecting operations, with the result that in the course of ten weeks Plague rats ceased to be found, and the town became free from the disease.

In this place the Department for the first time undertook large and widespread measures of disinfection of a whole town. The results, as far as can be ascertained, were thoroughly satisfactory.

Only one case of Plague, a lady, was noted to have occurred, and this is doubtful, as the disease was not diagnosed during life and no bacteriological examination was made, suspicion having been aroused only after the interment had been carried out. From the account of the illness and circumstances connected with the case, however, there would appear no reason to doubt that death was due to Plague.

Plague at East London.

On 19th February, 1903, suspicious mortality amongst rats was discovered to be taking place in the Harbour Board area at East London, carcasses of rats being first found in a Luggage Shed towards the North end of the Wharves.

During the course of the succeeding fortnight a number of carcasses of rats were discovered in various parts of the Harbour Board area. Specimens which had been forwarded to the Public Health Laboratory, Cape Town, were found to be Plague-infected.

Following on this mortality in the Wharf area, the rodent population of the adjacent parts of the Town became infected and a severe and widespread epizootic resulted.

On 19th March a case of Plague, in a Native male adult, was discovered; another case, also in a Native male adult, occurred on the following day. During the week ended 28th March a third case occurred; five further cases were discovered during the month of April and thirteen during May, three during June and three during July.

During this period Plague-infected rodents continued to be occasionally found in various parts of the town, and in all instances the cases in human beings were more or less clearly traceable to infection from rodents.

No case of the disease occurred during August, but a further case was discovered during the month of September, coincidently with an apparent recrudescence of the rat epizootic.

By the middle of December the extensive disinfecting operations at King William's Town had been completed; the Executive Officer who had carried them to a successful conclusion was accordingly transferred to East London and preparations were made for disinfecting the Town on wholesale lines. These operations were commenced on 26th September and completed on 1st March, 1904. The Harbour Board area, that first dealt with, presented great difficulty, as the part adjoining the wharves was almost entirely "made up" ground, consisting of large stones and boulders with spaces between and covered by a comparatively thin layer of ashes and earth. These subterranean spaces constituted what was, in effect, a huge rat warren. The difficulties of the work were also increased by the number of large grain and forage stores which required to be dealt with, and which, owing to an extensive fire which had occurred in the town some time previously, were, for the most part, in a very congested condition.

During the progress of the operations, six additional cases of Plague occurred, one of these being in a Native labourer employed on the Disinfecting Staff. The last case occurred on the 19th January, 1904, and the last Plague-infected rat was discovered on 26th March, 1904.

The total number of cases occurring was 34, of whom 5 were Europeans, 2 Coloured, 25 Natives and 2 Asiatics. The total deaths amounted to 21, comprising 1 European, 18 Natives and 2 Asiatics.

The total number of premises dealt with during disinfecting operations was 1,008.

It is by no means certain, however, that Plague infection has been completely and entirely eradicated. A small Staff is still being employed to destroy rodents and to search for evidence of sickness or mortality amongst them.

The occurrence of Plague amongst the rats on board the ship "Cromartyshire" whilst in the Harbour at East London is dealt with in the Section on Port Health Work.

Plague in King William's Town.

On the 7th March, 1903, cases of Plague occurred in the persons of two Natives working at the Railway Goods Shed at King William's Town; one of these died suddenly, the diagnosis of Plague being made *post-mortem*. Simultaneously with these cases, two cases of sickness occurred in two European employés, one employed as a checker in the Goods Shed and the other employed in handling goods outside the shed. Investigation at once proved these cases to be due to Plague and enquiry elicited the fact that for some time previously offensive smells had been noticed in the Goods Shed. The floor was then taken up and a number of dead Plague rats were found, some of which were lying under the place occupied by the desk at which the checker used to sit.

On the 10th March a sudden death, after a few hours' illness, occurred in a well-known European gentleman, an Accountant at one of the local Banks. Investigation also proved this to be a case of Plague.

With the discovery of the first case of Plague among the employés in the Railway Goods Shed, a Plague Medical Officer was placed in charge, and careful enquiries were made to discover any Plague-infected rodents. These enquiries, however, failed to elicit any account whatever of unusual sickness or mortality having been observed among the rodents in the town, although the statement was made by many of the inhabitants that an

unusual disappearance of rats had occurred in many of the Stores and premises in the town.

This, I may mention, is a frequent observation preceding the discovery of an outbreak of Plague in a place, the sequence being that an epizootic of Plague commences among the rat population which kills off a number and the rest migrate, so that the dwellers on the premises first notice a disappearance of rats accompanied frequently by bad smells. About this time the epizootic has reached such proportions among the rats that some have generally died out in the open and been picked up and brought to notice. Simultaneously with this occurring the first cases of Plague begin to take place among human beings.

No further cases occurred until 5th April, when a sharp outburst of the disease occurred among the inhabitants of the town at a number of comparatively distant centres, a large proportion of these cases being Europeans, an experience differing from that of other outbreaks we had had to deal with. The cases also were marked by extreme virulence. Steps were taken to deal with Stores and premises with the result that a large number of Plague-infected rats were discovered.

In view of the rapid spread and alarming virulence of the epidemic, it was decided to at once undertake a wide comprehensive scheme of disinfection directed to the discovery of rodents under floors, in ceilings and among stored merchandise, especially grain and forage, and the disinfection of all parts where Plague-infected rodents may have been, on lines similarly adopted at Graaff-Reinet, and to this end the Officer who had been in charge of the disinfecting operations at that place was transferred to King William's Town.

These operations commenced on the 28th May, and were concluded on 1st August, 1903.

The last case of Plague in human beings occurred on 6th June, but Plague rats continued to be found until 5th September.

A further case of Plague occurred on 16th November, in the person of a Native who died suddenly in the Tsolo Location of a disease which afterwards proved to be Plague. No further cases have occurred.

Plague at Kei Road.

On 5th April, 1903, and during the course of the Plague outbreak at King William's Town, a case of Plague occurred at Kei Road in the person of the Station Master's wife. The case, which has, in the Statistical Returns, been grouped with those occurring in King William's Town, was removed to the Plague Hospital at the latter place, the patient ultimately making a good recovery.

During the disinfection of the Railway premises, which was forthwith carried out, the carcasses of a number of rats dead of Plague were discovered in the Goods Shed. It was at the time believed that, with the disinfection of these premises, which are some little distance from the village, the infection had been completely eradicated, but subsequent events proved that this was not the case.

On 30th June Plague-infected rats were again discovered in the Railway premises, and it was accordingly decided to carry out the complete disinfection of the village. Part of the King William's Town Disinfecting Staff was detached for this work, which was commenced on 7th July, 1903, and completed on 30th of the same month.

During the course of these operations, it was found that the rodent epizootic had extended to an Hotel and several Stores in the village, and that a very considerably mortality from Plague had occurred among rats in the bush in the vicinity.

No further case of Plague in the human subject occurred, and no Plague-infected rodents have been discovered in the locality since 11th July, 1903.

Plague at Burghersdorp.

On 7th March, 1903, the Station Master at Burghersdorp reported that the carcasses of two or three rats had been found on the Railway premises there; unfortunately these carcasses had been at once destroyed. Enquiries were immediately instituted as to the existence of sickness or mortality among the rats in the Railway premises and Town, but nothing of a suspicious nature was discovered until 1st April, when the carcass of a rat forwarded to the Public Health Laboratory by the Station Master was found to be Plague-infected, the microscopic diagnosis of Plague being confirmed by inoculation experiments. On enquiry it was found that this rat had been caught in a cage trap in the Railway Goods Shed, kept for three days, it still remaining apparently healthy, and then killed and forwarded for examination.

Dr. Rees was despatched from Port Elizabeth to make further investigations, and as a result some 25 mice dead of Plague were discovered in a stack of forage adjoining the Railway Station.

On the 1st of June a Plague-infected rat was discovered in the Cape Police Camp at Mybergh, some 18 miles distant from Burghersdorp. Supplies of grain and forage had been forwarded to this Camp from the Railway Station some time previously.

The town of Burghersdorp is some considerable distance from the Railway Station, and is, moreover, practically free from rats, but on 12th June a Plague-infected mouse was found in a grain store in the central part of the town, and on the 23rd of the same month another infected mouse was found in the Market Square. No further extension of the disease took place.

Thorough disinfection of the Railway premises, the Police Camp, the Store in the town where the Plague-infected mouse had been discovered and other Stores in the vicinity was promptly carried out.

Subsequent to 27th June, 1903, no evidence of Plague in man or animals was discovered.

Plague at Queenstown.

On 28th April, 1903, a suspicious mortality was discovered to be occurring amongst rats on the Railway Station premises at Queenstown; carcasses of rats were forwarded to the Public Health Laboratory and found to be Plague-infected. A Medical Officer with Plague experience was at once despatched to Queenstown and prompt steps taken to disinfect the Railway premises, but it was soon found that the infection had already spread to the rat population in the vicinity; an extensive epizootic amongst the rodents followed.

On 30th June a case of Pneumonic Plague was discovered in a Native male adult, residing in the Municipal Location, and on the following day another case, also of the Pneumonic variety, developed in the same hut.

As a result of enquiries which were then instituted it was discovered that two previous cases had occurred. The first of these, a Native male, a hawker by occupation, who had for some days lived in the same hut, became ill on the 18th and died on 25th June. He had been attended during his illness by a local Medical Practitioner, who had certified that death was due to Pneumonia. The diagnosis in this case was never definitely established, but from the circumstances there can be no reasonable doubt that the cause of death was Pneumonic Plague.

The second case, also in a Native male in the Location, occurred on 26th June; the patient died on 29th idem and was buried without any Medical Certificate as to the cause of death and without having come under Medical observation. The body was exhumed on 4th July, when death was found to have been due to Plague.

Following on these four cases, three further cases occurred, infection in each instance being traceable to a previous one. All of these seven cases were of the Pneumonic or Pneumo-Septicæmic variety, and all proved fatal.

The eighth case occurred on 17th July in a Native male residing in the Town and sleeping in out-premises where Plague-infected rats were simultaneously discovered.

The ninth and last case, a Native male adult, became ill on 3rd August, and was only discovered after death on 5th August, subsequent bacteriological examination proving that death had been due to Plague. In this case the exact channel of infection was not traced.

During this period, Plague-infected rats continued to be found in various parts of the town. The disinfecting operations were for the most part limited to dealing with premises in which cases of Plague had occurred, or in which Plague-infected rodents had been discovered.

The discovery of the last Plague-infected rat took place on 29th January, 1904, and since that date, although a small Staff has up to the present date been retained to destroy rats and search for evidence of Plague-infection, nothing of a suspicious nature has been discovered.

Case of Plague at Grahamstown.

On 24th May, 1903, a Native male adult arrived at Grahamstown by train from Port Elizabeth and died suddenly shortly afterwards, and before leaving the Railway premises. On a *post-mortem* examination being held, death was found to have been due to Plague.

Enquiries elicited the fact that the deceased had been seen at Port Elizabeth by a local Medical Practitioner, who found him with high fever, furred tongue and general malaise, but he did not report the case as in any way suspicious of Plague; also that, in all probability, the deceased had evaded, by means of impersonation, the Plague Regulations regarding the Inoculation and inspection of Natives travelling by Rail from Port Elizabeth.

No spread of the disease took place from this case.

Plague at Knysna.

On 1st October, 1903, the decomposed carcass of a rat which had been found in a large Forwarding Store near the Landing Jetty at Knysna was forwarded to the Public Health Laboratory by the District Surgeon. On examination this carcass was found to be Plague-infected.

During the course of the next few days several more Plague-infected rat carcasses were found in the same Stores, and enquiries elicited the fact that offensive smells had been noticed in these Stores during the three weeks preceding.

Dr. Thornton, a Medical Officer with extensive Plague experience, was immediately despatched to Knysna, the disinfection of the infected premises commenced, and efforts made to limit the spread of the infection.

It was found, however, that the Town itself and the bush in its vicinity had an enormous rat population, and it soon became evident, from the discovery of Plague-infected rats in premises near those first infected, that the infection had already been disseminated.

On 10th October, a European female child, who lived in a cottage adjoining the premises first infected and was in the habit of passing through them on her way to and from School, was discovered to have contracted the disease, her illness having commenced on the evening of 5th October.

The patient was promptly isolated, and the case, which was a mild one, terminated in recovery.

During the latter part of October the epizootic spread throughout the rodent population of the Town, a large number of Plague-infected carcasses and sick rodents being discovered. Subsequently the infection spread to the rats in the bush in the adjoining country, numbers of Plague-infected rats being found at a distance of several miles from Knysna, and at Goona and Sourflats, the former being 12 and the latter 18 miles distant from the Town. This extensive dissemination of the infection was no doubt owing, in large measure, to the migration of rats from the town to the country, which in this District takes place annually during the harvesting season.

In view of the extensive infection of the town it was early decided to undertake cleansing and disinfection on wholesale lines. These operations were commenced on 7th November and completed on 19th January, 1904. The total number of rodents destroyed in the Town and District up to the latter date was 62,005 rats and 9,134 mice, of which about 24 were proved bacteriologically to have been Plague-infected; three Plague-infected cats were also discovered.

No further cases of the disease occurred in the human subject, and no Plague-infected rodent or other animal has been discovered in the Town or District since 26th December, 1903.

Plague at Seymour.

On 7th May, 1903, an unusual mortality was discovered to be taking place among rats at the Cape Police Camp in the village of Seymour. Specimens were immediately forwarded to the Public Health Laboratory for examination; these were found to be Plague-infected.

Dr. Rees, Senior Plague Medical Officer at Port Elizabeth, was immediately despatched to Seymour to investigate and carry out the necessary disinfecting and precautionary measures. During the course of the disinfecting operations a number of rat carcasses in a mummified condition were discovered, so that the rodent mortality would appear to have been taking place for some weeks before its existence was discovered. The infection was, in all probability, derived from King William's Town, from which Seymour obtains practically all its supplies.

No case of the disease occurred in the human subject.

Plague-infected Rat at Thomas River, in the Cathcart District.

On 9th May, 1903, a rat, dead of Plague, was discovered in a hen's nest at the Police Camp, Thomas River.

This Camp is situated about fifty yards from the Railway line and close to a water tank, at which Goods Trains frequently stop to take in supplies of water. Investigations, which were immediately set on foot, revealed the fact that, although there were a few rats and mice in the Camp stables and premises, these were quite healthy, and no further evidence of Plague was discovered.

The probabilities are that the infected rat had escaped from a Goods Train from East London while the engine was taking in water at the tank adjoining the Camp.

Plague-infected Cat at Riversdale.

On 20th June, the Resident Magistrate, Riversdale, reported that on the previous day a cat belonging to a well-to-do European resident in the town had suddenly sickened and died, and that on the same day and in the same house a second cat had become sick. This latter was killed on the following morning and the carcass forwarded to the Public Health Laboratory for examination. As a result of this examination the animal was found to have suffered from Plague, the microscopic diagnosis being fully confirmed by inoculation experiments on animals. An experienced Plague Officer was at once despatched to Riversdale and full investigations instituted. The town is practically free from rats, and mice are only present in small numbers. No evidence of Plague among the rodents in the town was discovered. Probably as a result of the announcement of the existence of Plague in the cat forwarded for examination, a considerable mortality took place amongst the local cat population. The cause of death was investigated in sixteen such cases, but with results entirely negative as to Plague.

Investigations were also carried out at Mossel Bay, from which Riversdale obtains most of its supplies of goods, but no further evidence of Plague was discovered.

Plague at Lady Grey Bridge, Paarl District.

On 11th November, 1903, a mortality amongst rats was discovered to be taking place in a Goods Shed at Lady Grey Bridge Station. Carcasses of rats found dead were forwarded to the Public Health Laboratory, and these on examination proved to be Plague-infected.

The Goods Shed was at once closed to traffic and Dr. Mitchell despatched to take over the direction of disinfecting operations. Arrangements were made for carrying out the disinfection of the infected area on wholesale lines, commencing at the periphery of the area and finishing at the central focus of infection—the Railway Goods Shed.

In all over 100 Plague-infected rats and mice were found in the Goods Shed, and during the progress of disinfecting operations a considerable number of infected rodents were found in the large Grain Stores adjoining the Railway Station.

The village of Lady Grey Bridge is comparatively isolated, being separated from Paarl by the Berg River. Probably owing to this fortunate circumstance the rodent population of Paarl remained free from infection.

Disinfecting operations were completed on 8th December, 1903, and subsequent to this date, with the exception of one very decomposed rat carcass found on 22nd December, which proved to be Plague-infected, no further evidence of the existence of Plague was discovered.

Incidence of, and Mortality from, Plague in the Colony.

The following Table shows the number of cases of Plague which have occurred in the Colony up to the end of March, 1904, the races of the patients, the number of deaths and the case mortality.

An interesting point brought out by this Table is the remarkable constancy of the mortality rate in each of the different races. This is highest in Asiatics, in which it is about 76 per cent., and lowest in Europeans, in which it is just under 33 per cent.; midway between these figures come the mortality rates for Coloured persons of mixed race and Natives, which are practically identical, namely, about 55 per cent.

Table showing the Number of Cases of Plague, Number of Deaths from Plague, and the Case Mortality per cent. up to 31st March, 1904, at each place in the Colony where cases of the disease in the human subject have occurred.

CENTRE.		Total Cases.			European.			Coloured.			Native.			Chinese.			Other Asiatics.		
		Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.
Izeli ...	...	13	4	30.77	...	...	...	...	...	...	13	4	30.77	...	...	...	...	...	...
Cape Peninsula ...	...	764	371	48.56	205	69	33.66	380	216	56.84	157	70	44.59	1	...	...	21	16	76.19
Mafeking ...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Imvani ...	...	1	1	100.00	1	1	100.00	...	...	...	...	...	...	...	...	...	...	...	...
Port Elizabeth ...	...	292	162	55.48	53	18	33.96	69	31	44.93	143	91	63.64	10	7	70.00	17	15	88.24
Uitenhage ...	...	5	3	60.00	...	...	...	...	...	...	4	2	50.00	1	1	100.00	...	...	...
Mossel Bay and Ladismith ...	...	15	6	40.00	5	1	20.00	10	5	50.00	...	...	...	...	...	...	...	...	...
East London ...	...	34	21	61.76	5	1	20.00	2	...	...	25	18	72.00	...	...	...	2	2	100.00
King William's Town and Kei Road ...	...	33	16	48.48	19	5	26.32	1	...	...	12	11	91.67	...	...	...	1	...	...
Queenstown ...	...	9	8	88.89	...	...	...	...	...	...	9	8	88.89	...	...	...	...	...	...
Grahamstown ...	...	1	1	100.00	1	1	100.00	...	...	...	...	...	...	...	...	...	...	...	...
Knysna ...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vessels ...	...	10	3	30.00	5	...	...	...	...	...	...	...	...	...	...	...	5	3	60.00
Total ...	...	1180	596	50.51	297	96	32.32	462	252	54.55	363	204	56.20	12	8	66.67	46	35	75.22

* Includes 1 Japanese.

9.—LEPROSY.

One of the most important matters of Public Health with which the Government is charged, is that of the segregation of Lepers.

This is not a subject with which the Medical Officer of Health for the Colony has to deal, except in so far that the responsibility is now placed upon him of ensuring that every person segregated under the Act is actually a Leper and one who should be segregated; all other matters connected with the subject, such as Warranting and removing Lepers, the carrying out of segregation and the administration of the Leper Asylums at Robben Island and Emjanyana, do not in any way come under his jurisdiction. He has, however, the right to inspect these Asylums and make any report thereon he may think fit to the Minister; also, occasionally, questions are referred to him for advice. The following Report, therefore, only deals with the Medical and Statistical aspects of Leprosy and its repression.

As it is now some years since any Report on the subject has been made, and, moreover, as a considerable period, nearly twelve years in fact, has elapsed since the Leprosy Repression Act was brought into operation, it may be well to deal with the whole question in some detail and to take into consideration this entire period in order to ascertain what results have so far been obtained by the working of the Act and the compulsory enforcement of segregation. This course is the more desirable inasmuch as great unrest has lately been bred among the Lepers under segregation and grave doubts as to the necessity for segregation have been engendered in the public mind by the recently proclaimed dictum of Mr. Jonathan Hutchinson, that the disease is caused not by contagion from the affected to the healthy but by the consumption of imperfectly cured fish.

Procedure at Present Followed.

Before dealing with the main subject, it may be well, in view of certain statements that have recently appeared in the Press by anonymous letter-writers, alleging that persons are being segregated who are not Lepers, to describe the system adopted in dealing with a person who is alleged to be suffering from the disease.

By the provisions of the Leprosy Repression Act all that is required before a Leper is Warranted for removal to an Asylum are two Certificates, certifying that the person is suffering from Leprosy and is at large and likely to spread the disease. One of these must be by a Medical Man and the other by a Field Cornet. The Medical Certificate is usually furnished by the District Surgeon of the District, and the Government also requires him to furnish a full Clinical Report on a form provided for the purpose and giving a minute description of the patient's symptoms. The Resident Magistrate is also required to make a report upon the social conditions of the patient. If at this stage there is any doubt whatever as to the nature of the disease, or if the patient demands it, the Government causes another independent Medical examination and report to be made by a second Medical Man. The whole of the papers are now submitted to the Medical Officer of Health for the Colony, who, upon the evidence, together with any other information he deems it necessary to obtain, including very often a bacteriological examination, recommends, or otherwise, the Minister to Warrant the patient for segregation. But before removal to an Asylum, every Leper is afforded an opportunity of making any proposals for his segregation at home. All such proposals are carefully considered in conjunction with the patient's physical and social condition, and his removal to an Asylum is not carried out until it is decided that such proposals are

not satisfactory. Before being removed to Robben Island the Leper is received at the Old Somerset Hospital, where he is again examined and passed by the Medical Officer at that Institution, who in any case of difficulty, is assisted by expert advice supplied from this Office. Finally, on his receipt at the Asylum he is again examined and reported upon by the Medical Officer at the Institution.

In addition to these safeguards, there has been appointed a Medical Commission, consisting of three Medical Officers of experience in Leprosy and of which the Medical Officer of Health is Chairman. The Commission visits the Asylums at intervals and examines all Lepers in regard to whom there may remain any doubt, or in whom it is thought that the disease may be arrested and also any, no matter in what condition the disease may be, who express a desire to be examined by the Commission. The Commission reports to the Minister its recommendation in every case examined.

Patients Discharged from Segregation.

The above elaborate and necessary system has only been in force in its entirety during the last few years. The system has gradually been evolved and perfected in the course of the Administration of the Act. In the earlier years, Warranting and segregation was carried out on the one Medical Certificate laid down by the Act and without reference to the Medical Officer of Health, and in those days Medical Men were less skilled in the diagnosis of the disease than they are at present. Also it must not be forgotten that long before the Leprosy Repression Act was brought into operation the Leper Asylum on Robben Island was in existence and sheltered a considerable number of Lepers who voluntarily sought an asylum there and were, therefore, not likely to have their disease so carefully investigated as when compulsorily segregated under the Act. Under these circumstances it would not be surprising, remembering the chronicity of the disease and the difficulties in many cases of arriving at an indisputable diagnosis, if some persons had been retained on the Island who were not actually suffering from the disease, and as a fact such cases have occurred.

The following Table shows for each year from the 1st January, 1892, to the 30th of April, 1904, the number of persons discharged respectively from the Robben Island Leper Asylum, the Emjanyana Leper Asylum and before removal to any Asylum (*a*) as not suffering from Leprosy, (*b*) as having the disease arrested, and (*c*) as being Doubtful cases. The latter being cases in which it is doubtful whether the patient ever had the disease or that it is arrested.

From this it will be seen that during this period of twelve and a quarter years there have been discharged a total of 139 persons; 108 of these having been discharged from Asylums and 31 before being removed to any Asylum. The disease was stated to have been arrested in 41 cases, the person not to have been a Leper in 21 cases, while in 77 cases the person's state was doubtful, but it may be accepted that most of them were not Lepers.

Most of these non-leprous cases were the residue of the indifferent system adopted in the earlier years for establishing the accuracy of the diagnosis in all warranted cases.

RETURN of Warranted Lepers discharged during the period 1st January, 1892. to 30th April, 1904.

Year.	Discharged from Robben Island Asylum.				Discharged from Emjanyana Asylum.				Discharged before Removal.				Total.
	Arrested.	Non-Leprous.	Doubtful.	Total.	Arrested.	Non-Leprous.	Doubtful.	Total.	Arrested.	Non-Leprous.	Doubtful.	Total.	
1892	...	...	...	...	...	...	...	...	...	...	...	...	...
1893	1	...	10	11	...	...	...	...	...	...	...	...	11
1894	...	1	4	5	...	...	...	...	...	...	1	1	6
1895	...	...	1	1	...	...	...	...	...	...	...	...	1
1896	...	...	...	...	...	...	...	...	...	1	1	2	2
1897	...	...	1	1	1	1	...	2	...	4	...	4	7
1898	...	...	...	...	2	2	20	24	...	2	1	3	27
1899	...	...	1	1	...	...	2	2	...	1	6	7	10
1900	13	1	1	15	...	...	1	1	...	...	2	2	18
1901	2	1	3	6	8	...	3	11	...	...	4	4	21
1902	4	...	4	8	9	2	1	12	...	1	...	1	21
1903	1	...	2	3	...	...	1	1	...	...	2	2	6
1904	...	...	2	2	...	2	...	2	...	2	3	5	9
Total	21	3	29	53	20	7	28	55	...	11	20	31	139

Note.—These figures do not include one Non-Leprous and four arrested Oranje River Colony cases. Most of the "Doubtful" cases may be accepted as either not suffering from Leprosy or having had the disease arrested so as to render the diagnosis doubtful.

Suitability of Robben Island for a Leper Asylum.

There is another point which has for long past been receiving much public attention, which is, whether Robben Island is, or is not, suitable as a place of segregation.

On this matter I think that were the Government now commencing the segregation of Leprosy *de novo* or for the first time it is possible that a more suitable and satisfactory place for an Asylum might be found upon the mainland, but I am sure that if due weight be given to all the arguments for and against the removal, it is doubtful whether the balance of advantage would lie with the mainland. However that may be, I feel satisfied that such disadvantages as Robben Island may possess as a place of segregation are not so important as to greatly override its manifest advantages or to greatly exceed parallel disadvantages that must be incidental to any other place of segregation, nor do I consider that they would justify the huge expenditure that such a move would entail.

It would be hard to find a place in every way suited to the purpose, and, therefore, having once selected a reasonably good one and established at great expense an Asylum there, it would appear unreasonable to abandon it unless weighty grounds existed for believing it to be fundamentally unsuited as a place of detention for Lepers.

The arguments raised against Robben Island are briefly as follows:—

(a) That the climate is too humid and is detrimental to the special condition of the Leper.—With regard to this, the experience of non-leprous residents is that it is a very healthy place of abode, and there is no evidence to show that the Lepers themselves suffer any evil consequences from residence there. The climate is, of course, a marine one, but it is considerably drier than many places on the mainland which have been strongly advocated as being suitable places for an Asylum, and it is drier than many

districts from which a very large number of the Lepers have been removed. The average annual rainfall for the years 1898 to 1903 is only 19·79 inches and the number of rainy days annually 83.

(b) That there is an absence of vegetation and shade.—This is so, but much improvement could be made in this respect.

(c) That the glare of the sea and the sand is injurious to the patients' eyes.—There is probably some truth in this, but in many cases the effect of the disease itself on the eyes is attributed to this cause.

(d) That there is no available garden ground for cultivation by the Lepers.—The experience is that very few Lepers would avail themselves of the opportunity of gardening if it existed. Such opportunities as they have had they have neglected. It is, indeed, difficult to cause any of the Lepers to undertake work of any kind.

(e) That the place is so isolated as to almost entirely cut off Lepers from their friends.—This is hardly the fact. Any place which is chosen for a Leper Asylum must necessarily be more or less isolated and off the road. Robben Island, while satisfactorily isolated, is within easy reach, especially of those Districts supplying the majority of Lepers sent to it. It has frequent communication with Cape Town and is made easily accessible to friends by the Government. In my opinion the Lepers on Robben Island are much more accessible than they would be at Vygeboom, the Farm in the Caledon District purchased by the Government some time ago for the establishment of a Leper Asylum.

(f) That the very name of Robben Island implies everything that is repugnant to the mind owing to the uses it has been put to in the past as a place of detention for Convicts, Lunatics, Lepers and persons suffering from loathsome disease.—This is no doubt true, but it is equally certain that any place used as a Leper Asylum would eventually come to be regarded with aversion. As a matter of fact, there is no place where the Leper could have equal freedom within limits and the enjoyment of so many amusements as he has on Robben Island, nor would any Asylum on the mainland be less isolated in situation. Indeed, there is reason to believe that the local opposition to the establishment of a Leper Asylum would be almost insurmountable in most districts of the Colony. In principle the essence of the Leper's objection to Robben Island lies in his objection to segregation itself, and, on the principle that any change is better than no change, he agitates for removal to the mainland.

The Emjanyana Asylum was established in the Native Territories in order to satisfy the objections of the Natives to removal to the Island from their Native Districts. Nevertheless, experience has shown that agitation at Emjanyana has been even greater and more difficult to control than at Robben Island.

Unfortunate Effect of the Agitation for Removal to the Mainland.

This agitation for removal has had one very unfortunate effect. The uncertainty of the future which it has engendered in the Government has resulted in the stoppage of the provision of necessary additional accommodation on the Island, so that insufficient accommodation has both prevented the prompt removal and segregation of Lepers at large in the Country, thus seriously retarding the stamping out of the disease, and has been exceedingly detrimental to those Lepers actually segregated on the Island, inasmuch as for years past the Leper Wards have been injuriously overcrowded; their periodical evacuation for cleansing and disinfection has been rendered impossible; no proper classification and separation of patients could be carried out, so that probationary, mild and severe cases

have had to be crowded together; whilst until quite recently the wholly indefensible system of accommodating healthy children of Lepers in the Leper Wards was followed.

Causes of Mortality among Segregated Lepers.

As a result, diseases such as Tuberculosis and Erysipelas have been rife among the Lepers and have caused considerable mortality. In the following Table is shown the number of deaths of Lepers on Robben Island with the annual rate of mortality during each of the years 1892 to 1903, from the following causes, namely, Leprosy, Phthisis, General Tuberculosis, Pneumonia, Septicæmia, Erysipelas, and all other Diseases.

TABLE shewing certain causes of Death of Lepers who died on Robben Island during each of the years 1892-1903 and the rate of mortality per cent., calculated on the average daily number of Lepers during the year.

		1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Average Daily Number of Lepers on the Island during the year ...		249	497	549	533	506	524	535	564	548	537	530	542	6114
CAUSE OF DEATH.	Total Deaths.	Death Rate.	Total Deaths.	Death Rate.	Total Deaths.	Death Rate.	Total Deaths.	Death Rate.	Total Deaths.	Death Rate.	Total Deaths.	Death Rate.	Total Deaths.	Death Rate.
Leprosy ...	8	3.2	6	1.2	4	0.7	4	0.8	11	2.2	38	7.3	42	7.9
Phthisis ...	3	1.2	31	6.2	27	4.9	25	4.7	39	7.7	39	7.4	21	3.9
General Tuberculosis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia ...	1	0.4	3	0.6	2	0.4	2	0.4	3	0.6	6	1.1	3	0.6
Septicaemia ...	2	0.8	4	0.8	4	0.7	4	0.7	5	1.0	2	0.4	1	0.2
Erysipelas ...	1	0.4	5	1.0	2	0.4	...	...	2	0.4	1	0.2	...	...
All other Diseases ...	25	10.0	65	13.1	57	10.4	32	6.0	31	6.1	22	4.2	12	2.2
Total ...	40	16.0	114	22.9	96	17.5	82	15.4	98	19.3	108	20.6	80	15.0
									95	16.8	92	16.8	70	13.0
													68	12.9
													92	17.0
													1035	16.9

From this Table the following points will be noted:—

(a) From the year 1894 the daily average number of Lepers under segregation has remained practically unchanged, although numbers of Lepers in the Colony have been awaiting segregation.

(b) The annual death-rate has been exceedingly heavy, ranging from 12·9 per cent. to 22·9 per cent.; that for the whole period of twelve years averages 16·9 per cent.

(c) Phthisis and General Tuberculosis have caused a mortality of 5·2 and 0·8 per cent., respectively, or over one-third of all the deaths. Also Septicæmia and Erysipelas have resulted in a mortality of 0·4 and 0·2 per cent. respectively.

(d) The mortality for the years 1902 and 1903 from the same causes at Emjanyana Asylum was as follows:—

Cause of Death.	1902.		1903.	
	Number of Deaths.	Death-rate per cent. of Leper population.	Number of Deaths.	Death-rate per cent. of Leper population.
Leprosy	9	2·3	10	2·0
Phthisis	7	1·8	10	2·0
General Tuberculosis	6	1·5	12	2·4
Pneumonia	6	1·5	10	2·0
Septicæmia	6	1·5	13	2·6
Erysipelas	—	—	1	0·2
Other Diseases	11	2·7	20	4·0
Total	45	11·3	76	15·1

(e) For comparison with the General Population it may be stated that during the year 1902 (the latest for which statistics are available) the mortality from Tuberculosis among the inhabitants of the thirty-five chief towns of the Colony amounted to 0·44 per cent., or 0·17 per cent. for Europeans and 0·76 per cent. for Coloured. No figures are available for the Rural Districts of the Colony, but it is probable that the mortality was less than in the towns. The great majority of Lepers are drawn from Rural Districts.

(f) It is reasonable to believe that with better and more hygienic accommodation the mortality from these infective diseases could be diminished. It must, however, be borne in mind that Lepers are particularly prone to the development of Phthisis.

The following table shows the age composition of the Lepers at present confined on Robben Island.

It will be seen that there are twenty-nine Lepers under fifteen years of age, the youngest being seven years, and three upwards of seventy-five years. The majority of Lepers, however, both males and females, are between the ages of thirty and forty-five years, the average age of males being $36\frac{1}{2}$ and of females $37\frac{1}{2}$ years.

TABLE showing the Leper Patients on Robben Island on the 30th April, 1904, and the number at each age period, distinguishing between (a) European and Coloured, and (b) Males and Females.

	0-9		10-14		15-19		20-24		25-29		30-34		35-39		40-44		45-49		50-54		55-59		60-64		65-69		70-74		75 Upwards		Not Stated.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
European	...	1	3	2	3	4	6	3	6	1	9	1	6	3	5	5	3	1	4	2	5	...	...	...	3	2	...	...	...	...	...	...	53	25
Coloured	...	1	14	8	18	12	34	12	20	13	37	28	50	23	39	24	25	18	31	17	14	12	9	8	10	...	2	2	1	2	5	1	309	181
Total	...	2	17	10	21	16	40	15	26	14	46	29	56	26	44	29	28	19	35	19	19	12	9	8	13	2	2	2	1	2	5	1	362	206
																																		568

Delay in Removal of Lepers.

With regard to the delay in the removal and segregation of Lepers at large in the Colony and the effect it may have had in continuing the spread

of the disease, some information can be obtained from a consideration of the figures relating to the discovery and removal of Lepers in the different districts of the Colony.

In Annexure "B" will be found printed a Return showing for each district of the Colony Proper, excluding Bechuanaland, the number of Lepers on the Register on the 31st December, 1891, together with the number of cases discovered and the manner of their disposal, during the period included between the 1st January, 1892, and the 31st December, 1903. It should be mentioned that the Leprosy Repression Act, although passed in 1887 was only promulgated and brought into operation on the 17th May, 1892.

From this Return it will be seen that, although during this period of twelve years 2,282 Lepers were discovered, only 1,494, or but 65 per cent., were actually removed to a Leper Asylum; 270 died before removal, 301 absconded and were lost sight of; in 26 the disease was reported to have become arrested, while 191 were still at large in the several Districts at the end of the period on 31st December, 1903.

In the Native Territories the delay in the removal of Lepers has been even greater than this, but reliable figures are not available to demonstrate its extent. Thus there were discovered in the Native Territories during the period from the 31st January, 1893, to 31st December, 1903, including the number of Lepers on the Register on the 31st December, 1892, 1,462 Lepers, twelve of whom were Europeans and the remainder Natives. But there were removed to an Asylum only 724, or less than 50 per cent. of the whole. Exactly what has become of the others there are no records to show.

Here it must be pointed out that the above figures do not represent all the Lepers actually at large in the Colony. The discovery of Lepers depends entirely upon notifications made by Medical Men and persons under whose observation they may come, so that as a rule only fairly well-marked cases are brought to light. The Authorities have never taken measures for the purpose of seeking out and discovering Lepers, nor in view of the limited Asylum accommodation would it have availed much if such measures had been taken.

In the Native Territories especially, only some of the more obvious cases have been brought to notice. It is possible that this fact serves to account for the very much larger number of Anæsthetic cases among the Lepers segregated at Emjanyana as compared with those on Robben Island, the deformities and loss of members in this form of the disease being more easily recognised by the uninformed than are the lesions resulting in the Tubercular variety. The percentage proportion of such cases is 84·3 of all the inmates in Emjanyana, as against 59·4 on Robben Island.

The number and proportion of the different varieties of the disease among the inmates of these two Asylums are shown in the following table:

Variety of Leprosy.	Robben Island.		Emjanyana.	
	Number.	Percentage proportion.	Number.	Percentage proportion.
Tubercular	103	18·7	27	5·3
Mixed	112	20·3	53	10·3
Anæsthetic	328	59·4	431	84·3
Unstated	9	1·6	...	...

In my opinion there must be at present at least a thousand Lepers at large in the Colony.

Prevalence of Leprosy in the Colony.

In Annexure "B" are printed Returns (No. 2) showing the number of Lepers on the Register on the 31st December, 1891, and the number of fresh cases discovered in each District of the Colony Proper during each of the years from 1892 to 1903; and (No. 3) the number of Lepers on the Register on the 31st December, 1892, and the number of fresh cases discovered in each District of the Native Territories during each of the years 1893 to 1903.

Varying Prevalence in Different Districts.

A consideration of the figures given in these Returns demonstrates the fact that different districts of the Colony are very differently affected by the Disease, and that, indeed, there are large tracts which appear to be practically free from Leprosy, while there are others in which the disease seems to be frequent in its occurrence.

In the following Table I have attempted to demonstrate this fact:—

TABLE showing the relative prevalence of Leprosy in certain Groups of Districts in the Colony Proper.

District.	Mean Population Census of 1891—1904.			No. of Lepers on Register on the 31st December, 1891, together with No. of lepers discovered during years 1892-1903.			Proportion of Lepers per 1000 of Population.		
	Europeans.	Coloured or Native.	All Races.	E.	C.	All Races.	E.	C.	All Races.
Cape	84,270	70,529	154,799	29	208	237	0·34	2·98	1·54
Stellenbosch	6,511	11,014	17,525	5	55	60	0·77	4·99	3·42
Paarl	10,354	15,564	25,918	20	74	94	1·93	4·75	3·63
Malmesbury	11,817	14,599	26,416	8	85	93	0·68	5·82	3·52
Piquetberg	7,706	5,305	13,011	16	34	50	2·08	6·41	3·84
Caledon	7,099	6,522	13,621	22	43	65	3·10	6·59	4·77
	127,757	123,533	251,290	100	499	599	0·78	4·04	2·38
Humansdorp	4,591	8,263	12,854	...	44	44	...	5·32	3·42
Uitenhage	9,835	16,589	26,424	1	17	18	0·10	1·02	0·68
Port Elizabeth	18,861	17,156	36,017	2	28	30	0·11	1·63	0·83
Alexandria	2,533	7,874	10,407	...	30	30	...	3·81	2·88
Somerset East	7,263	13,261	20,524	2	28	30	0·28	1·89	1·46
Graaff-Reinet	7,011	11,271	18,282	2	21	23	0·29	1·86	1·26
Cradock	7,152	9,752	16,904	6	34	40	0·84	3·49	2·37
Albany	9,895	16,601	26,496	2	75	77	0·20	4·52	2·91
Bedford	2,346	10,125	12,471	1	29	30	0·43	2·86	2·41
Fort Beaufort	3,400	13,877	17,277	4	19	23	1·18	1·37	1·33
Stockenstrom	1,769	7,089	8,858	1	35	36	0·57	4·94	4·06
Queenstown	7,100	21,337	28,437	3	45	48	0·42	2·11	1·69
Glen Grey	927	46,410	47,337	...	164	164	...	3·53	3·46
Wodehouse	5,965	10,797	16,762	3	15	18	0·50	1·39	1·07
Aliwal North	5,352	7,119	12,471	...	19	19	...	2·67	1·52
Herschel	236	30,743	30,979	...	149	149	...	4·85	4·81
Cathcart	2,356	6,814	9,170	...	17	17	...	2·49	1·85
Victoria East	1,457	14,607	16,064	...	44	44	...	3·01	2·74
King William's Town	9,961	82,447	92,408	2	257	259	0·20	3·12	2·80
Peddie	1,401	16,713	18,114	1	45	46	0·71	2·75	2·59
East London	13,450	21,946	35,396	1	32	33	0·07	1·46	0·93
	122,861	390,791	513,652	31	1147	1178	0·25	2·94	2·29
Kimberley	20,332	33,664	53,996	4	94	98	0·20	2·79	1·81
Barkly West	4,050	18,013	22,063	1	45	46	0·25	2·49	2·09
	24,382	51,677	76,059	5	139	144	0·21	2·69	1·89
All other Districts of the Colony excluding Be- chuanaland *	184,406	235,982	420,388	67	294	361	0·36	1·25	0·86

NOTE.*—Bechuanaland excluded as not forming part of the Colony during the whole of the period under consideration, viz. 1892-1903.

It will be seen that the different Districts of the Colony can be grouped together into classes according to the degree to which they are affected by the disease, and that the Districts that are equally affected are more or less contiguous to one another, thus forming large areas in which the disease is either prevalent or rare, as the case may be. In the above Table I have grouped the several Districts according to the degree of prevalence of the disease. It is difficult without the aid of a map to demonstrate the continuity in area of the different Districts forming the groups shown in the Table, but I may say that as far as possible the Districts have been arranged in the Table in the order of contiguity one to another.

The Table shows for European, Coloured and All Races the mean population of the Districts during the period from the Census of 1891 to that of 1904; the number of Lepers of each race discovered during the period and their rate per thousand of the mean population.

Leprosy in the Western Province.

It will be seen that Leprosy finds its chief home in the Colony in the Western Province, in the contiguous Districts of the Cape, Stellenbosch, Paarl, Malmesbury, Piquetberg and Caledon. These Districts possess a mean population of 127,757 Europeans, 123,533 Coloured, and 251,290 All Races. The proportion of Lepers discovered per thousand amounted to 0.78 for Europeans, 4.04 for Coloured, and 2.38 for All Races. Of these Districts the greatest proportion of the disease, both among Europeans and Coloured, is in the Caledon District, where it is for all races no less than 4.77 per thousand. Moreover the proportion diminishes in the case of each District forming the group in almost unbroken order as the District is farther removed from Caledon.

Caledon is the historic home of leprosy in the Colony, its prevalence there going back to our oldest records. It was in this district that very many years ago, in 1817, the first Leper Asylum was established at the spot known as "Hemel en Aarde."

Leprosy in the Eastern and Midland Districts.

The next group in the order of prevalence is formed of the Districts of which Stockenstrom may be taken as the centre. Most of these are Districts containing a very large Native population, several of them, such as King William's Town, Glen Grey and Herschel, being purely Native Districts, their mean population amounted to 122,861 Europeans; 390,791 Coloured and Native and 513,652 of All Races.

The proportion of Lepers discovered was 0.25 per thousand for Europeans, 2.94 for Natives, and 2.29 for All Races. Of these Districts the disease is the most prevalent and persistent, in Stockenstrom, 4.06; Herschel, 4.81; Glen Grey, 3.46, and King William's Town, 2.80 per thousand of All Races.

It is a noticeable fact that in the purely Native Districts of King William's Town, Glen Grey and Herschel, no removal of Lepers took place until the last few years, owing to the absence of accommodation at Emjanyana Asylum, with the result that very many discovered Lepers were left for years at large in these Districts.

In Kimberley and Barkly West.

The next area is formed of the adjoining Districts of Kimberley and Barkly West, of which the mean populations amounted to 24,382 Europeans, 51,677 Coloured, and 76,059 All Races. In this area the pro-

portion of Leprosy, though still high, is less than in the other two areas, being 0·21 for Europeans, 2·69 for Coloured, and 1·89 for All Races. The disease has shown great annual persistency in these Districts. A large proportion of the population are Native Mine Labourers and are only temporary residents in the area who come chiefly from the Native Districts. It may be that the larger amount of discovered Leprosy is due to the greater surveillance they are subjected to in the Mines; I am, indeed, informed by a reliable Medical Authority in Kimberley that from his observation he is of opinion that as it is there are a considerable number of unrecognised cases of Leprosy amongst the Natives employed on the Mines.

Comparison with the Rest of the Colony.

If now we compare the figures given in respect of the above groups of 29 Districts with the remaining 60 Districts of the Colony, we must be struck with the comparatively diminished extent to which Leprosy prevailed in them. These Districts are very extensive but more sparsely populated than those we have just been dealing with, the mean population being 184,406 Europeans, 235,982 Natives and 420,388 All Races. The total number of Lepers discovered was 361, as compared with 1,921 in the other Districts mentioned. The proportion per thousand of the mean population was 0·36 for Europeans, 1·25 for Coloured, and 0·86 for All Races.

It is to be noticed that in several of these Districts, as in Carnarvon, Sutherland and Prieska, no single case of Leprosy has ever been discovered, while in most of them only occasional cases have made their appearance.

Method of Spread.

Reviewing these figures it seems clear that there must be some cause at work resulting in the notably endemic prevalence of the disease in certain districts. That the cause is the persistence of foci of infection there can be little doubt, but whether such foci consist solely in the presence of Leprous persons or whether the infection may not also be spread through an intermediate agent, such as by infected houses, soil or other means, it is not within our present knowledge to even surmise. That, however, the Leper himself is the actual source of infection to others may be taken as being certain.

The following facts bearing upon this point may be recorded:—

Leprosy in Families.

That Leprosy frequently affects several members of a family has for long past been a well recognised fact. Formerly this fact was explained upon the theory that the disease was an hereditary one. This theory has now been disproved by the investigations of certain bodies of scientific experts which have from time to time been appointed to consider the question.

That the members of some families are less able to resist the attack of the Leprosy bacillus, should it invade the body, than are others is possible, but it may be accepted as a fact that where several members of the same family contract the disease each has been separately infected. If this be the case the extent to which it is found that Leprosy attacks more than one member of a family may be taken as some indication of the infectiveness of the disease.

Of the 568 Lepers at present confined on Robben Island, 379 are members of families in which no other case of the disease has occurred, whilst 189 are members of families in which two or more cases have occurred. Thus over 33 per cent. of the cases have, or have had, affected relatives. This is a strikingly high proportion in the case of a disease so comparatively rare as Leprosy, and clearly indicates that the tendency to spread is greatest under conditions of close association.

Of the Lepers belonging to Leprous families, in 67 cases there were two Lepers in the same family, in 48 cases there were three Lepers, in 33 cases there were four Lepers, in 32 cases there were five Lepers, in 5 cases there were six Lepers and in 4 cases there were seven Lepers in the same family.

In connection with this enquiry a large number of Leper family trees have been prepared. Many of these are of considerable interest, and I regret that it is not possible to reproduce them with this Report. The following, however, is an analysis of some of them:—

Both Parents Lepers.

Amongst 134 families having more than one relative suffering from Leprosy, in 15 cases both parents were affected.

In eight of these families there were Leprous children. In six families there were healthy children and no Lepers (one living Leper refused to give information).

In the above fifteen families there were 57 children, 12 of whom were Lepers (6 sons and 6 daughters) and 45 were healthy.

Fathers Affected.

In 17 cases the father and children were affected. In these 17 cases the mother was not known to be a Leper.

In 8 of the cases the original Leper was not segregated, but died at home, the remaining 9 lived at home for long periods before segregation, one for 16 years, one for 9 years, two for 5 years, one for 4 years, and three for 2 years.

In one case no particulars regarding the time he was segregated at home could be obtained.

The 17 Leper fathers had 8 Leper daughters, 18 Leper sons and 57 healthy children.

Mothers Affected.

In 31 cases the mother and children were the ones affected. In these 31 cases the father was not known to be a Leper. In 11 cases there was a distinct history of the person or persons acting as nurse to the original Leper contracting the disease; in one case mother and daughter who nursed a Leper son segregated at home both developed Leprosy.

In 19 out of the 31 cases the original Leper in the family was not segregated but died at home; the remaining 12 lived at home for long periods before segregation, one for 15 years, two for 11 years, one for 9 years, one for 5 years, and one for 3 years.

In three cases it was not known how long they were at home as Lepers before being segregated.

The 31 Leper mothers had 22 Leper daughters (in three cases the daughter became affected before the mother who acted as nurse to her) and 19 Leper sons (3 of the sons were affected before the mother who acted as nurse).

Seventy-six healthy children are noted, but in a number of the cases the number of healthy children is not stated.

Some Examples of Leprosy in Families.

The following are notes of certain Leper families:—

The G—h Family, Ceres District.

No cases of Leprosy were known in this family at the time that the parents adopted the orphan son of a woman who died from Leprosy. This boy afterwards developed Leprosy. He associated with the son and daughter of the foster-parents. The son later contracted the disease.

The C—r Family, Caledon District.

John C—r, European, aged 16 years, was certified to be a Leper, Anæsthetic variety, on the 15th February, 1896. Home segregation was allowed. He was nursed by his mother, Jacobina Gertrude C—r, a European, aged 68; for six years, she was her son's sole attendant and washed his clothes, etc.

In 1902 she developed Leprosy, also of the Anæsthetic variety.

The R—g Family, Jakalsvlei.

The Grandfather, a Leper, had three children, two of them died Lepers, the third, a son, while still healthy, married and had four children, one of his sons developed Leprosy in 1894, while he himself, the father, became affected in 1895.

The other three children are not known to be Lepers.

The H—n Family.

A man himself healthy but a member of a Leper family (he had a Leper brother and a Leper nephew) married a healthy woman but also a member of a Leper family (her brother was a Leper). These two had six children; three of these children developed Leprosy while three remained healthy. The man died, the cause of death is not known, but is stated not to have been Leprosy. The widow married a second time, her husband on this occasion was the son of a Leper mother, he had a sister who was a Leper and two brothers not Lepers. By this second husband the widow had two sons who were healthy and a daughter who was a Leper. Furthermore her second husband later became a Leper. There is no record of the woman herself being a Leper.

Steyn, Loubser, Van Wyk Families.

A herdsman, Cupido, on the Steyns' farm, at Van Kelder's Hoek, suffered from the Mixed form of Leprosy. Cupido's son became affected and left the farm; his after history is unknown.

Cupido used to carry about Sophy Steyn, a daughter, aged 4 years, and it has been suggested that the child became infected from Cupido, who used to give her some "Cooka Makronka" (a kind of leek) to eat which he carried about in his hat.

This daughter was segregated (so called) at home and died in 1885. The daughters of a family named Van Wyk, near neighbours, used frequently to visit at the house and intimately associated with the Leper

daughter, Sophy. One of these Van Wyk girls subsequently died of Leprosy on Robben Island in 1895; a second Van Wyk girl developed Leprosy in 1896 and is still alive on Robben Island; while still later a son of the Van Wyk family developed Leprosy in 1903.

To return to the Steyn family, Sophy appears to have conveyed the disease to her father, Albert Steyn, who suffered at first from the Anæsthetic Form, afterwards becoming Tubercular; its onset was in 1886, and he died at home in 1892. It is also believed that Sophy Steyn gave the disease to the coachman of the family named "Robert," who also suffered from Leprosy.

Mrs. Albert Steyn, the mother, nursed her daughter and her husband, and she subsequently developed Anæsthetic Leprosy in 1894 and was still on Robben Island.

Another woman, Mrs. W. Marie, of Riebeek Kasteel (not a relative), nursed Albert Steyn, and she also later developed Tubercular Leprosy and died on Robben Island.

From the Steyn family the disease was spread to the Loubser family; Cornelia Loubser, a niece of Albert Steyn, having frequently visited him at Van Kelder's Hoek Farm, and it is stated "often kissed her uncle as she was very sorry for him." She developed Tubercular Leprosy, being admitted to Robben Island on the 11th October, 1893, and died in April, 1899.

But before segregation she evidently conveyed the disease to her husband, Gabriel Loubser, the date of onset of the disease in his case being about 1900, he is now a well-marked case of Tubercular Leprosy.

The Case of Certain Lepers Segregated at Home in District of George.

Three Lepers, Jacobus Johannes Barnard, Lewis Botha, and Marthinus Young, were warranted and sent to Robben Island in July, 1898; in the beginning of December proposals were submitted on their behalf for their home segregation. They were not satisfactory, but in view of strong representations from the district the Government acceded to the proposals and the three were discharged from the Island on the 18th August, 1899. Segregation appears to have been unsatisfactorily carried out, and on the 18th September, 1901, the District Surgeon of George reported that he found a person named Jan Diederick Gerhardus Botha, a brother of the Leper Botha, living with the three Lepers, Botha, Barnard and Young. He was then a Leper.

At this time the District Surgeon also reported that he considered Jacobus Johannes Botha, father of the Bothas, to be a Leper, and he also thought Susan, his wife, was suffering from the disease. Doubts having been raised by the persons of their being Lepers, they were examined some nine months later by Dr. Paterson, of George, who reported that "he considers they are both suffering from Leprosy; also that the segregation of the other Lepers is inadequate, people going to the segregation camp can be seen when about three miles away. The segregation camp is surrounded by dwelling-houses of eleven families more or less related to the Lepers—700 yards radius would include all families. The segregation camp is situated in the midst of 1,500 people in the most populous part of George, and no provision is made for supervision. The wife of one of the segregated Lepers lives 300 yards away."

I have given these details in order to illustrate the effect of Home Segregation improperly carried out. Here we have the development of three cases of Leprosy following upon the return to their home of the Leper Jacobus Johannes Botha: namely, his brother, his father and his mother.

I feel bound to state my opinion that in very few cases can home segregation be relied upon in this country. The people themselves, in most instances, appear not to be sufficiently imbued with the necessity for exercising the greatest care to prevent the spread of infection, so that very seldom are proper measures of segregation conscientiously put into force.

At the present time there are only eight Lepers officially segregated at their homes in the Colony. The entire number of whom local segregation has been authorised has only amounted to twenty-two, of whom seven have died, two have been discharged and five removed to Robben Island owing to failure to conform to the conditions of segregation.

Mr. Hutchinson's Fish Theory.

In the light of experience it would appear to be an unnecessary task to discuss whether Leprosy is communicable from man to man and whether its spread is due to this cause; yet, owing to the fact of the recent publication of Mr. Jonathan Hutchinson's fish theory of origin, a great amount of unrest among the segregated Lepers of the Colony has been caused, and grave doubts have arisen even in the minds of the public as to the actual need for segregation. Under these circumstances, I cannot well pass Mr. Hutchinson's views over in silence.

His theory is, that the disease is due to the consumption of fish, but as a very large proportion of the world's population are fish-eaters while Leprosy is a comparatively rare disease, it was manifestly impossible to attribute the disease to the eating of any kind of fish. Mr. Hutchinson therefore asserts that the disease is due to the consumption not of fresh fish but of badly-cured fish. Nowhere, however, does Mr. Hutchinson state in what respect the method of curing is defective and what exact condition in the fish is injurious. Even, however, although he confines the effect to badly cured-fish, he is faced with the dilemma that, whereas Leprosy is caused by the presence in the human body of a specific organism, the *Bacillus Lepra*, this organism has never been discovered in cured fish, nor, indeed, anywhere else unconnected with the human body. He is, therefore, forced to supplement his supposition of badly-cured fish being the cause of the disease by the assertion that the fish contains some agent or "virus" which, on being consumed, results in the production of the Leprosy Bacillus. At this point he is at once confronted with the difficulty that no agent or virus can originate the Leprosy Bacillus *de novo*, and, therefore, unless the bacillus is commonly found in the body unaccompanied by Leprosy his theory falls to the ground without some further supposition. As the Leprosy Bacillus is not found in the human body unaccompanied by the manifestations of Leprosy, he was forced to fall back upon some other organism for the purpose, and for this he has chosen the Tubercle Bacillus, apparently owing to its morphological similarity to the Leprosy Bacillus, and he, therefore, propounds the theory that the Leprosy Bacillus is merely a modification of the Tubercle Bacillus, brought about by some virus existing in badly-cured fish.

I need hardly say that there is not one iota of proof in support of this fish theory in any one of its numerous steps. There is no evidence whatever of there being any such virus in badly-cured fish or in any other fish, or that, if such virus exists, it is able to transform the Tubercle Bacillus into the Leprosy Bacillus. Indeed, I know of no parallel case in Medicine where a well-attested case of one disease can be altered by the action of another organism, or of a virus, or of any other agent, into a totally different disease associated with a different organism, capable of propagating

itself and reproducing this different disease by contagion from person to person, the latter a mode of production of Leprosy that even Mr. Hutchinson himself has been forced to admit takes place.

But quite apart from a scientific aspect of the question, there is the practical refutation, that a very large proportion of Lepers, at any rate in this Colony, have never eaten fish in their lives.

A careful enquiry was made on this point in regard to the Lepers confined on Robben Island and at Emjanyana. With regard to Emjanyana, at which Asylum only Natives are segregated, practically most of whom come from the Native Territories and other inland Districts of the Colony, out of 511 Lepers only 45, or 8·8 per cent. have ever tasted fish; of this number, 29 only ate it occasionally and 16 as a regular article of diet.

There is no doubt that these figures are correct, great care having been taken to ascertain the truth, and the Lepers at this Asylum, owing to their ignorance, know nothing about Mr. Hutchinson's fish theory.

On Robben Island, however, the matter is quite different. I accompanied Mr. Hutchinson when he visited this Island, and I was present when he examined different Lepers as to the question of their having eaten fish, and I know that only a comparative few were able to state that they had eaten fish, although I am bound to confess that Mr. Hutchinson in many cases pressed them very severely in order to obtain a positive admission from them. The case now is quite altered, the inmates on the Island having since that time perused and digested Mr. Hutchinson's views as to the fish origin of the disease, which have been published widely in the Press; and, therefore, with few exceptions when the present enquiry was instituted they nearly one and all stated that they had not only eaten fish but that it was a regular article of their diet; and, furthermore, in order to clinch the matter, nearly everyone of them affirmed that he had equally consumed both cured and fresh fish. Of the 568 Lepers on the Island the number who did not claim to have eaten fish was 104, none of whom were Europeans.

Opinion of the Fish Theory of the Leading Experts in Leprosy.

If anything were required to show the unsoundness of Mr. Hutchinson's theory it would be the solid weight of opinion opposed against it of the leading Experts on Leprosy of the world. These include the names of Dr. H. Marcus Fernando, of Ceylon; Dr. Phineas Abraham; Dr. J. D. Hillis, of British Guiana; Dr. L. W. Sambon, of the London School of Tropical Medicine; Dr. Hansen, of Norway; Dr. Goodman, of Cairo; Sir Patrick Manson, Medical Adviser to the Imperial Colonial Office; Dr. Ehlers, the great Scandinavian Authority; Dr. James Cantlie, and others whose views have been recorded on the subject of the theory and all of whom are opposed to it and have advanced many sound arguments against it.

Necessity for Amended Legislation on Leprosy.

If the segregation of Leprosy is to be effectually carried out, and especially if it is to be undertaken in the early stages of the disease, better powers are needed, both for the protection of the public and for the sake of the Leper himself. The points on which amended powers are required may be briefly stated as follows:—

(a) Better powers are required for enforcing the proper notification of Lepers and of disease suspicious of being Leprosy.

(b) Powers, properly safeguarded against abuse, should be given for enabling the compulsory Medical examination of a person reasonably sus-

pected of suffering from Leprosy. At the present time, if a Leper refuses to be examined no power exists to compel him to submit. In the case of persons reasonably supposed to be insane and in the case of persons reasonably suspected of suffering from Syphilis, the Magistrate, after due enquiry, has the power to order compulsory Medical Examination.

(c) Powers should be provided whereby a person reasonably suspected of being a Leper can be compelled to keep himself under observation, and to exercise some amount of segregation pending enquiry being made into his true condition. At the present time many Lepers abscond while steps under the existing Act are being taken for the necessary warrant to be issued for their removal and segregation.

(d) Provision should be made in any Legislation for the carrying out of home segregation under proper safeguards and regulations. At the present time any home segregation is carried out practically without authority. Where this is done, the only control in the hands of the Government is the power to remove the Leper to an Asylum in the event of his failing to properly carry out segregation.

10.—WORKING OF “THE CONTAGIOUS DISEASES PREVENTION ACT, 1885.”

Working of Part I. of the Contagious Diseases Prevention Act.

Part I. of the Contagious Diseases Prevention Act No. 39 of 1885, which provides for the periodical Medical examination, and, when necessary, the detention in Hospital of common Prostitutes, is at present, and has for some years past, been in force in the following Divisions:—Cape Town, Wynberg, Simon's Town, East London, King William's Town, Port Elizabeth and Uitenhage. I attach herto (Annexure “C”) Returns showing particulars of the working of Part I. of the Act during each year from 1897 to 1903, inclusive, and of the expenditure incurred in connection therewith. The Reports of the Medical Inspectors appointed under the Act will also be found printed at the end of this volume.

Effects of Act 36 of 1902.

Up to the coming into force of the “Betting-houses, Gaming-houses and Brothel Suppression Act,” No. 36 of 1902, the working of Part I. of Act 39 of 1885 was, on the whole, satisfactory, and a very great amount of good was effected to the health of the community at a comparatively small cost. As I pointed out to Government would be the case when Act No. 36 of 1902 was before Parliament, the effect of this Act has practically been to repeal Part I. of Act No. 39 of 1885. No other result could have been expected as the two enactments are based upon entirely different lines of policy and are mutually destructive. The Act passed in 1885 provides for the examination of common prostitutes, necessitating the keeping of a Register of particulars as to address and so forth. That passed in 1902 provides heavy penalties on persons keeping brothels, the enactment not being aimed directly at prostitutes themselves, but at the keepers of brothels, persons procuring females for immoral purposes, and male persons living on the proceeds of prostitution. In order to carry into effect the provisions of this Act, in the Districts where Part I. of Act 39 of 1885 was in force, the first step might have been for the Police to have obtained the addresses of registered common prostitutes from the Medical Inspector, or from the Magistrate. This procedure would, of course, have at once put an end to the working of Part I. of the Act of 1885, but it was not

resorted to; and, instead of being at once annulled, Part I. of the Act of 1885 has been, so to speak, left to die a lingering death. The registered prostitutes in the Districts where this Part is in force were given to understand by the several Medical Inspectors that the Police did not have access to the Register, and the endeavour was made to persuade them that the fact of their conforming to Part I. of Act 39 of 1885 in no way increased the risks of prosecution under Act 36 of 1902. Many of the women have, as was natural, not been convinced of this. The position resulting from this state of things is most anomalous, for on the one hand we have one set of Government Officers, namely, the Medical Inspector (and in fact also the Resident Magistrates, who, it would appear from the terms of the Act, are the legal custodians of the Registers of Prostitutes) in possession of information which another set of Government Officers, namely, the Police, are engaged, under Act 36 of 1902, in endeavouring by round about means to elicit.

Gradual Abrogation of Part I. of Act 39 of 1885.

That Part I. of Act 39 of 1885 is gradually becoming of no effect will be evident from a consideration of the annexed Returns and of the Reports from the several Medical Inspectors; thus, in Cape Town at the beginning of 1903, there were 188 names on the Register; during the year 50 fresh names were added, and 189 names were removed, of whom no less than 168 are returned as "disappeared or absconded," so that at the end of the year only 49 names remained on the Register. In Port Elizabeth, 9 fresh names have been added during the year, and 34 have been returned as "disappeared or absconded." In Wynberg, 20 fresh names have been added, whilst 29 have been removed, of whom 22 are returned as having "disappeared or absconded." In Simon's Town and King William's Town, there are slight increases, presumably due to the fact that in these Districts but little activity has been displayed in enforcing the provisions of Act 36 of 1902. The nett result of the working of Part I. of the Act of 1885 in all Districts is that at the beginning of the year there was a total of 437 names on the the Register; during the year 102 fresh names were added, and of the total of 539 no less than 229 are returned as having "disappeared or absconded," so that, with the removals from the other causes, at the end of the year only 265 names remained on the Register.

It may be said that in any District where Part I. of Act 39 of 1885 is in force the number of women dealt with under its provisions will vary inversely with the activity shewn by the Police Authorities in enforcing the provisions of Part IV. of Act 36 of 1902. That Part I. of the first-mentioned Act will in the near future become of no effect there can be little doubt.

Effect of the Operation of Act 39 of 1885.

The question, therefore, arises whether the gain effected by the Act of 1902 has counterbalanced, or more than counterbalanced, the loss sustained by the effects of this enactment on the working of Part I. of the Act of 1885. There can be no question but that the former has, more especially in Cape Town and Port Elizabeth, where considerable activity has been displayed in enforcing its provisions, had a marked effect in repressing open vice, but that it has had any appreciable effect in diminishing prostitution and immorality is, I think, more than doubtful. It is impossible to ascertain, and difficult even to estimate, the exact value, from the point of view of Public Health, of a measure such as Part I. of the Contagious Diseases Prevention Act. That it has never reached all prostitutes, or even the majority of them, must be admitted; no other result could

have been expected, especially in this Colony, where so much prostitution is carried on in the open, and in which so many girls in service practise it in conjunction with their other employment. But because the Act has not reached every prostitute does not, to my mind, supply any valid argument for its abrogation, unless it can be shewn that its working has been entirely without beneficial effect. But this is not the case, for, undoubtedly, the Act has greatly protected the health of the community. Thus, during the year 1903 there were 512 women on the Register, 116 of them being Europeans, and 396 Coloured. This number of women underwent 4,258 periodical medical examination, which resulted in finding them diseased on no less than 157 occasions, the number of separate women actually found to be diseased being 146, some of them having contracted the disease more than once during the year. The nature of the disease consisted in 41 cases of Syphilis, in 88 cases of Gonorrhoea, and in 28 cases of Soft Chancre, or other non-syphilitic venereal diseases. All of these women were taken into Hospital and detained there until cured, the detention amounting in the aggregate to 6,918 days. Now, in many, and probably in the majority, of these cases, the disease was in the early stage and would not have prevented the woman from following her calling, and, therefore, I think, it is a sound inference to draw that, if these women had not been segregated, and had plied their calling on an average, only once on each night, they would have been afforded 6,918 opportunities of spreading infection, which, in a large percentage of cases, would have been Syphilis. Nor does this probably represent anything like the extent of the harm which these diseased women would have been capable of doing, for, whereas, by going into Hospital, they were cured and soon rendered innocuous, they would, if at large, probably not have undergone treatment of themselves until long after the disease was well advanced, so that each of these sufferers from contagious disease would have been spreading the infection for a considerable period of time. This is, of course, only the direct good: a still larger amount of indirect good has resulted, for many of the persons they would have infected would in their turn have infected others, and often innocent persons.

Surely, with these figures before one, it is impossible to say that the Act has not been effecting a great amount of good from the point of view of Public Health!

With regard to the cost of working the Act, the expenditure incurred in each District during each of the years from 1897 to 1903 is shewn on the Table attached; the total expenditure on the working of Part I. of the Act during 1903 was £3,903 2s. 3d.

Objections to Part I. of Act 39 of 1885.

Regarding the contention that the enforcement of Part I. of Act 39 of 1885 assists in demoralising the female and confirms her in prostitution, this argument is, I think, without foundation in fact. It has been a common experience of all Medical Inspectors under the Act that as soon as a female submits to periodical medical examination she tends to improve in her personal cleanliness, and that she displays no evidence of deterioration or loss of self-respect. This point has been brought out year after year in the Reports of the Medical Inspectors. That the working of the Act is not resented by the females concerned is shewn by the fact that of 512 women examined during 1903 only 45 were compulsory submissions under Section 10 of the Act, the remainder having come under the Act voluntarily and of their own accord. Moreover, it is perhaps unnecessary to state that the working of the Act is entrusted

to responsible Medical Officers, and that frequent enquiry and inspection on the part of this Office has always shewn that the women under examination are never treated with any indignity or want of respect.

As to the contention put forward by certain persons that by removing the danger of acquiring disease it increases the temptation for immorality among men and thus increases immorality, it seems to me that this contention is purely hypothetical ; there are no facts known to me which lend it support. A man intending to have illicit intercourse with a prostitute does not, I imagine, stop to consider whether Part I. of the Contagious Diseases Prevention Act is in force in the particular District in which he happens to be. On the contrary I very much doubt whether the majority of the public are aware in which Districts of the Colony the Act is in force, or even that it is in force in any. Furthermore, those persons who are aware that the Act is in force are also aware that it by no means reaches all prostitutes, and that it, therefore, affords no efficient guarantee that any particular prostitute is free from contagious disease.

I am aware that, at one time, the Medical Inspector's notice given to each female on attendance for examination, notifying the date and place of the next examination, was, in some cases, used by the prostitutes as a kind of Medical Certificate of her freedom from disease, but enquiry shewed that this was done only in very few cases. In order, however, to prevent this practice the use of these forms was discontinued, or rather the notice was served on the female at the time of examination, she being required to immediately return it duly endorsed by her to the Medical Inspector. As a matter of fact, if a Medical Certificate were of any great value to a prostitute, there is no doubt means would in many cases be taken by them to obtain Medical Certificates of Health from private Medical Practitioners.

Many opponents of the Act even go so far as to assert that the contraction of venereal disease by a man through illicit intercourse is a just punishment for his sin, and that Man should, therefore, not interfere with such Divine retribution. I think, however, that such persons forget that when a man is affected with venereal disease, even if with Gonorrhœa, but much more certainly if with Syphilis, he is not only liable to, but will in all probability, sooner or later, infect some innocent woman, thereby often causing her life-long ill-health. Nor is it only to the woman that this injury may result ; it may also be carried on to the offspring. Surely this is carrying the idea of retribution to extremes ? Under all the circumstances, I am of opinion that the gradual abrogation of Part I. of Act 39 of 1885 is, from the point of view of Public Health, a matter for regret.

Working of Part II. of the Contagious Diseases Act, No. 39 of 1885.

Part II. of Act 39 of 1885, which applies to both sexes and all sections of the Public, is in force throughout the several Districts of the Colony and Native Territories. I attach Returns shewing the results of the working of this Part of the Act during each of the years from 1897 to 1903.

Increase of Syphilis.

The most important fact brought out by these Returns is the recent alarming increase of Syphilis in the Colony generally, and, more especially, in the various Districts of Bechuanaland and in the Kimberley, Namaqualand, and Barkly West Districts. In the District of Taungs, it has been estimated that there are 2,000 Natives suffering from Syphilis, or about

8·7 per cent. of the entire population. In the Vryburg District, the estimate is 1,000, or 5·6 per cent. of the population; in Mafeking, 800, or 3·7 per cent. of the population; and in Kuruman over one-third of the entire Native population.

In several other Districts of the Colony, such as Britstown, Oudtshoorn, Worcester and King William's Town, the disease has become increasingly rife—much more so than is indicated by the Returns. Syphilis has become very common among the Natives working on the Kimberley Mines, with the result that it is rapidly becoming disseminated throughout the Native Territories and those Districts of the Colony Proper which have a large Native population.

Syphilis in Europeans.

The Returns give no adequate indication of the extent to which Europeans are affected, as these come under the official notice of the District Surgeon or Magistrate in only a small percentage of cases. With a Native and Coloured population extensively infected with Syphilis, the infection, to a greater or less extent, of the European population, is inevitable. There is every reason to believe that in Bechuanaland and the other large Native Districts, the infection is in a large percentage, perhaps in the majority, of cases, conveyed by non-sexual channels. This holds true to a still greater extent in the case of the infection of Europeans by Natives. In cases of the latter kind, a frequent channel of infection is by the medium of Native or Coloured Nurse-girls. In one instance which has come to my knowledge, a Native Nurse-girl infected the infant child of a well-to-do European farmer—probably by kissing; the child subsequently conveyed the infection to the mother, who, in turn, infected the father. Before the cases came under Medical observation, two other children of the family had also contracted the disease.

The gravity of this question of the spread of Syphilis is one which, I fear, is not fully appreciated either by Government or by the general public. I regard it as one of the most serious Health problems which the Colony has to face—even more serious, in several respects, than that of Leprosy.

Measures at Present Being Taken.

At present the treatment of Syphilitic Paupers is carried out by the District Surgeon at a charge to Government of 7s. 6d. per month per case, Iodide of Potassium used for this purpose, being supplied by Government free of charge. There are also a number of small Government Contagious Diseases Hospitals for the treatment of Patients under Part II. of the Act scattered throughout the Colony. Individually, these Hospitals are, as a rule, unsatisfactory in a greater or less degree; in not a few instances they are entirely unsuitable for the treatment of Patients, in some places they are a blot on the District. Collectively, the annual expenditure on their maintenance is a heavy one. For years past, I have, on the score both of efficiency and economy, strongly advocated the establishment of a few, say, two or three, central Contagious Diseases Hospitals for the treatment of Patients whilst in a contagious condition, but on the grounds of expense, my recommendations have not met with the approval of Government. On the contrary, it has recently been decided that in future, whilst Government will continue to maintain existing Contagious Diseases Hospitals, no new ones will be erected unless the Local Authority contributes towards the cost of construction on the £ for £ principle. I am strongly of opinion that this policy, while it may effect a certain temporary saving, will in the long run prove to have been short-sighted and ill-advised.

At present, no statutory powers exist for the compulsory detention of persons other than prostitutes suffering from venereal disease in a contagious condition. Such powers are absolutely essential, from the administrative point of view, for the effective segregation and isolation of cases of this nature, and I am of opinion that such powers should be provided in any new Contagious Diseases Bill which may be introduced.

11.—TUBERCULOSIS.

Prevalence of the Disease.

The great and increasing prevalence in this Colony of Tubercular diseases, and more especially of Pulmonary Consumption, is a matter which has for a number of years past compelled my attention, as it must have that of everyone interested in the Public Health of the Colony.

There is a general concensus of opinion that twenty years or so ago Phthisis was a comparatively rare disease here; now, unfortunately, it is an exceedingly common one. One of the principal agents in its dissemination has undoubtedly been Phthisical patients coming to South Africa in the hope of deriving benefit from the climate. Many of these persons, finding no suitable accommodation available, have crowded in amongst healthy persons at Hotels, Boarding-houses and other places throughout the Colony and have thus spread infection broadcast. In addition, however, to imported cases and others infected directly therefrom, a very serious spread of the disease has, within the past few years, occurred in the Native Districts of the Colony and amongst the Hottentot and Mixed Coloured section of the population of the South-Western Districts and of the Cape Peninsula.

The serious and increasing prevalence of the disease will be evident from the following Table of Deaths from Tuberculosis in the thirty-two Chief Towns of the Colony during the years 1896, 1897 and 1898, and in the thirty-five Chief Towns of the Colony during each year from 1899 to 1902 inclusive. The populations here given are calculated from the Census of 1901, and the unaudited figures of the Census taken last April. The Registrar-General is not at present able to furnish me with the Death Returns for 1903:—

TABLE showing in regard to certain Chief Towns of the Colony the number of deaths registered during the years 1896, 1897, 1898, 1899, 1900, 1901 and 1902, and the rate of mortality per 1,000 of their combined estimated population from (a) Tuberculosis and (b) All Causes.

	1896. 32 Chief Towns.			1897. 32 Chief Towns.			1898. 32 Chief Towns.			1899. 35 Chief Towns.			1900. 35 Chief Towns.			1901. 35 Chief Towns.			1902. 35 Chief Towns.		
	All Races.	European.	Coloured.	All Races.	European.	Coloured.	All Races.	European.	Coloured.	All Races.	European.	Coloured.	All Races.	European.	Coloured.	All Races.	European.	Coloured.	All Races.	European.	Coloured.
Estimated Population of Chief Towns.	266,939	138,686	133,253	276,780	135,136	141,644	285,383	138,997	146,386	302,259	147,046	155,213	311,872	151,390	160,482	322,997	155,944	167,053	388,875	209,146	179,729
No. of Deaths from Tuberculosis.	1,007	204	743	1,067	256	811	1,253	277	973	1,501	316	1,185	1,605	362	1,243	1,510	367	1,143	1,719	355	1,364
No. of Deaths from All Causes.	8,673	2,791	5,882	8,616	2,667	5,949	9,618	2,730	6,888	11,125	3,232	7,893	14,474	3,995	10,479	13,337	3,598	9,738	12,690	3,629	9,061
Rate of Mortality from Tuberculosis per 1000 of the estimated population.	3.77	1.98	5.58	3.86	1.89	5.73	4.39	1.99	6.67	4.97	2.15	7.63	5.15	2.39	7.75	4.67	2.35	6.84	4.42	1.70	7.59
Rate of Mortality from All Causes per 1000 of the estimated population.	32.50	20.88	44.14	31.13	19.74	42.00	33.70	19.64	47.05	36.81	21.98	50.85	46.41	26.39	65.30	41.29	23.07	58.29	32.63	17.35	50.41

Comparative Prevalence in the Different Races.

From the above it will be seen that, while in 1896 the mortality from Tuberculosis amounted for All Races to 3·77 per 1,000, in 1902 it had increased to 4·42 per 1,000, and that the increase has been steadily going on from year to year up to 1900, when it reached 5·15 per 1,000; since then it has slightly declined. If Europeans be separated from Coloured, it will be seen that the Death-rate from Tuberculosis of Europeans has slightly diminished rather than increased during the period covered by the Table, but the percentage proportion which it forms of all deaths among Europeans has increased, owing to the general Death-rate having improved. The great increase in Tuberculosis has been among the Coloured population, which has increased from 5·58 per 1,000 in 1896 to 7·59 per 1,000 in 1902. Coincidentally with this increased mortality from Tuberculosis the total mortality from All Causes has also greatly increased. It must be noted that the figures given in the above Table are only for the Urban Districts of the Colony; the mortality in the Rural Districts is no doubt considerably less.

For purposes of comparison it may be mentioned that the mortality from Tuberculosis in England and Wales during the last three decennial periods for which figures are available was as follows:—1861-1870, 2·47; 1871-1880, 2·12; 1881-1890, 1·72.

It will thus be seen that the mortality from Tuberculosis among Europeans in the Colony is no greater than that in England; in fact, roughly speaking, it may be taken to be about the same, but among the Coloured population the mortality is about four times as great as that in England.

Tuberculosis likely, in the Future, to be the Scourge of the Coloured and Native Races.

In my opinion Tuberculosis is going to be in the future the great scourge of the Native and Coloured population of this Colony, nor do I well see how the rapid spread of this disease is to be prevented under the existing standard of domestic hygiene which prevails among them, and with their herding together as they do in small, ill-ventilated huts and dwellings, with promiscuous spitting over the floor. It is difficult enough to educate European persons to a recognition of the danger of infection from Phthisical persons and to impress upon them that simple hygienic means, if observed, will largely prevent the danger. If this be so in the case of Europeans, it becomes a practical impossibility in the case of Natives and Coloured persons. Moreover, amongst the Coloured and Native Population the nature of the malady will not, in the majority of cases, be recognised until the patient is in the advanced stages of the disease.

In this connection it may be mentioned that abdominal forms of Tuberculosis are much less common in this country than in England, probably owing to the fact that Bovine Tuberculosis, a common disease in Europe, is comparatively rare in South Africa.

Proclamation of Tuberculosis as a Notifiable Disease.

On 4th February, 1903, I submitted a memorandum to Government drawing attention to the prevalence and alarming spread of Tuberculosis and strongly recommending that it be proclaimed a contagious and infectious disease within the meaning of Section 27 of the Public Health Amendment Act of 1897, at the same time suggesting that, before taking

any definite action in this direction, Government should obtain the advice of the Colonial Medical Council in regard to the matter. The Medical Council, to whom the matter was referred, unanimously approved of the recommendations made and urged upon Government the advisability of taking action on the lines above indicated. Following on these representations, Tuberculosis was, by Proclamation No. 93, dated 20th March, 1903, proclaimed to be an infectious and contagious disease within the meaning of the above-mentioned Section. It has since then also been proclaimed to be a contagious and infectious disease within the meaning of the Public Health Act of 1883.

Under these Proclamations, Tuberculosis is now a notifiable disease falling within the same category as Small-pox, Cholera, Diphtheria, Enteric Fever, and other infectious diseases. It seems to me that no reasonable objection can be taken to such notifications and that no unnecessary hardship need result therefrom to any patient or other person; even the slight measure of publicity which notification ordinarily entails may be obviated, without impairing the utility of the procedure, by the Local Authority directing that notifications of Tuberculosis be made direct to its Health Officer.

Advantages of Notification

The benefits to be derived from notification depend to a great extent upon the action taken by Local Authorities upon receipt of such notifications and the manner in which measures are carried out; but, in the first place, the mere fact of notification will impress upon the patient and his friends what, unfortunately, at the present time is almost universally ignored, namely, the fact that Tuberculosis, and more especially Phthisis, is an *infectious* disease and that the presence of a Phthisical patient is, therefore, a considerable danger to those associating with him unless proper precautions be taken. In the second place, it will enable the Local Authority, and through the Local Authority the Government, to insist upon some of the simpler precautions being taken, at least in the more infectious forms of the disease; thus, for example, the necessity for disinfecting, or destroying by fire, the sputum of such patients can be insisted upon, and Hotel or Boarding-house keepers can be prohibited from accommodating Phthisical persons in bedrooms with healthy persons. Steps may also be taken in several other important respects for minimising the risk of spread of the disease; thus, for example, on the death or change of residence of a case of Phthisis, the Local Authority should carry out the proper disinfection of the premises previously occupied by the patient.

A further advantage is, that valuable statistical information regarding the prevalence of the various forms of Tubercular disease will be obtained.

In this connection the attention of Local Authorities and others concerned may be directed to the great desirability of tabulating separately cases coming into this Colony from Oversea or from other Colonies, and what may be termed indigenous cases, or cases in which the disease has been primarily contracted in this Colony.

Difficulties of the System.

Some little difficulty may be expected to occasionally arise owing to the chronicity of most forms of Tuberculosis, or to changes of address or of Medical Attendant on the part of patients, resulting in multiple notifications, but this difficulty is scarcely such as to constitute any serious objection to the system,

Expectoration in Streets and Public Places, or in Public Vehicles.

It has been suggested that a Bye-Law or Regulation be promulgated prohibiting spitting on the Streets, or in Railway Carriages, Tramcars or other public vehicles.

To enforce such a Regulation as applied to Streets and Public Places would be attended with very great difficulty; it would, moreover, be calculated to create a great deal of popular irritation. The application of a Bye-Law of this nature to Railway Carriages is scarcely practicable, while each ordinary smoking compartment of the Cape Government Railways is fitted with two spittoons.

Under all the circumstances, and as a matter of general policy, it seems to me that the promulgation of any Bye-Law of this nature would be inadvisable; the matter can best be remedied by the education of the Public and the diffusion of knowledge regarding the communicability and manner of transmission of the disease. With these objects in view, a popular Association, on the lines of the British National Association for the Prevention of Consumption, is at present in course of formation, largely owing to the efforts of Dr. B. J. Guillemard and following on a Paper read by him before a meeting of the South African Medical Congress held in Cape Town in December last. The movement has enlisted the strong sympathy and support of His Excellency the Governor, and there is every reason to expect that it will effect a great amount of good.

12.—ERYSIPELAS.

Prevalence of the Disease.

In the middle and latter part of the year 1903 a serious prevalence of Erysipelas occurred in Kimberley and District. The disease at the time not being a notifiable one, accurate statistics are not obtainable, but the Health Officer to the Kimberley Board of Health estimates that during the latter half of the year over 200 cases occurred in the area. A considerable number of the cases were of a severe type and highly infectious. In one instance, a Native female, certified as suffering from Syphilis, was admitted late in the evening into the Contagious Diseases Ward connected with the Kimberley Hospital. Next morning an erysipelatous rash was observed around a sore on her arm and she was at once removed from the Ward and isolated. The female Dresser employed in the Ward had dressed this patient's sores and had subsequently proceeded to attend to the other patients in the Ward. Thorough disinfection was promptly carried out and the Dresser forbidden to touch any other cases, yet, notwithstanding these precautions, no less than twenty-six patients were attacked. The disease, however, was of a mild nature, and Dr. Russell, to whom I am indebted for these particulars, reports that its effects were rather beneficial to the patients, as sluggish Syphilitic ulcers which had previously resisted treatment for months commenced to heal rapidly.

A considerable number of similar instances of infection in connection with this epidemic have been brought to my notice. So far as can be ascertained, no previous epidemic of Erysipelas had occurred in Kimberley within recent years.

In the Death Returns of the Registrar-General, Erysipelas is classed with Cellulitis. In the thirty-five Chief Towns of the Colony during the year 1902, the total number of deaths recorded from this disease is twenty-

one, of which ten were of Europeans. These figures do not, of course, convey any adequate idea of the prevalence of the disease, as, under ordinary circumstances, the case mortality rate is small.

Proclamation of Erysipelas as a Notifiable Disease.

In view of the prevalence of the disease in Kimberley, the Board of Health, during the latter part of 1903, made strong representations to Government advising the proclamation of Erysipelas as a contagious and infectious disease within the meaning of Section 27 of Act 23 of 1897. I recommended Government to accede to these representations and the Colonial Medical Council, to whom the matter was referred, unanimously approved of the proposal. Erysipelas has since been proclaimed to be a contagious and infectious disease within the meaning of the Public Health Act of 1883 and Section 27 of the Public Health Amendment Act of 1897.

It may be remarked that, in England, Erysipelas is a notifiable disease in the case of some Local Authorities but not of others, local option being allowed in the matter.

The only objection which can possibly be taken to its proclamation in this Colony as a notifiable disease is the small expenditure entailed on Local Authorities in respect of such notifications by Medical Practitioners. On the other hand, the great advantages derivable from the procedure are obvious, more especially in the case of areas where the Local Authority possesses a proper Infectious Diseases Hospital, to which cases of Erysipelatous disease, which cannot be satisfactorily treated and isolated in their own homes, can be removed. Even where the Local Authority is not in possession of these facilities, the procedure is calculated to be beneficial, as it will enable the Local Authority to ensure that proper measures are taken for preventing the spread of the disease, and that Nurses or other persons attending on cases of the disease do not at the same time nurse patients suffering from any other disease, or midwifery cases.

13.—PUERPERAL FEVER.

Prevalence of the Disease.

During the year the number of notifications of cases of Puerperal Fever made to Government by Local Authorities throughout the Colony under the provisions of the 28th and 29th Sections of the Public Health Amendment Act, 1897, amounted to 31, of which 12 were in Europeans. The Death Returns for the year are not yet available, but during 1902 the total number of deaths registered in the thirty-five Chief Towns of the Colony as having been due to this disease was 24, of which 3 were of Europeans and 21 of coloured persons or Natives.

Unsatisfactory Nature of Present Legislation.

The position of Government and of Local Authorities in regard to the prevention of Puerperal Fever is a most unsatisfactory one. Section 9 of the Medical and Pharmacy Act, 1899, provides that if "any person practising Midwifery for profit shall, through uncleanness or failure to take the precautions ordinary and proper for preventing or safeguarding against Puerperal Fever or any similar disease, cause injury or serious ill-health to any lying-in woman" such person shall be liable to fine or imprisonment, the Section also containing the proviso that no prosecution under it "shall be initiated until the Attorney-General shall have, after consultation with the Medical Council, if he thinks such consultation necessary, decided upon

such prosecution." Beyond the provisions of this Section there is no statutory enactment dealing with the matter. There is nothing requiring persons practising as Midwives to be registered, and no means of ensuring that such persons are aware of the importance of absolute cleanliness and that they possess at least a rudimentary knowledge of the use of antiseptics in connection with midwifery cases. The above-mentioned Act and the Regulations framed thereunder provide for the holding of examinations in Midwifery by the Colonial Medical Council and the issue by the Council of Certificates of Competence in Midwifery to qualified persons. Such Certificated Midwives, however, possess no special privileges; indeed, they are rather at a disadvantage as compared with uncertificated ones, as they are, by Regulation, required to keep Registers of cases attended and prohibited from administering drugs or using instruments, whereas uncertificated Midwives are subject to no regulations or restrictions. Neither the Government nor the Local Authority concerned possess authority to prohibit a Midwife who is herself suffering from some septic disease, or who is at the time being, or has recently been attending cases of Puerperal Fever, Erysipelas or other infectious disease, from attending on midwifery cases.

Procedure at Present Followed.

The procedure which I have invariably followed, as being that best calculated, under the present unsatisfactory legislation, to limit or prevent the spread of the disease by Midwives, is, when a case of Puerperal Fever is notified to this Office by any Local Authority, to ascertain whether there has been any Midwife in attendance upon the case, and if so, the name and address of such Midwife, and to enquire from the Medical Attendant, and also, when deemed necessary, from the friends or relatives of the patient, whether there is any reason to believe that the disease was due to any carelessness of, or infection from, the Midwife. In several cases in which very strong presumptive evidence was elicited that the infection had resulted from carelessness or negligence on the part of the Midwife in attendance, Affidavits have been procured and forwarded to the Attorney-General with a view to prosecution under the Section above quoted, but, so far, no proceedings under this Section have been instituted. Where two or more cases occur in the practice of any Midwife within a short period so as to give rise to the suspicion that the infection has been conveyed by her, the Midwife concerned, if resident in Cape Town or neighbourhood, is requested to attend at this Office and is there severely cautioned and served with a Notice informing her that if she attends any lying-in woman during such period as may be considered necessary in order to restrict the chance of carrying infection—usually about three weeks or a month—she will do so at her own risk and be liable to heavy penalties in the event of any injury to any such woman resulting therefrom. In the case of other Districts, the Magistrate of the District is requested to carry out this procedure. There is, however, no means of preventing any such Midwife from attending cases of midwifery during the specified period, and, should she disobey the instructions given, there is no law under which she can be proceeded against unless injury or serious ill-health to a lying-in woman has resulted therefrom.

I am strongly of opinion that in any Medical or Midwives' Bill which may be introduced to Parliament, provision should be made for empowering Government or Local Authorities to take and enforce effective measures for preventing the spread of Puerperal Fever by Midwives.

14.—ISOLATION OF CASES OF INFECTIOUS DISEASE.

In all large centres of population the need for the provision of suitable accommodation for the isolation and treatment of cases of Infectious Disease, such as Diphtheria, Enteric Fever, Scarlet Fever, Measles, Erysipelas and so forth, is so obvious as to require no advocacy from me. Without such accommodation, efficient Health administration by the Local Authority, at least in the case of Urban areas of any considerable size, is impossible. In the Form of Notification of Cases of Infectious Disease by Medical Practitioners, under Section 29 of the Public Health Amendment Act No. 23 of 1897, which has been drawn up in this Office and which is now issued free by Government to Local Authorities for distribution to Medical Practitioners within their areas, there is contained a query as to whether the Patient can be properly isolated at home. It is clear that such notifications and the furnishing of particulars of this nature are of little or no use unless the Local Authority is prepared, on receipt thereof, to take such measures as may be necessary for preventing the spread of the disease; in the majority of the cases, without proper isolation accommodation, it is practically impossible for these measures to be efficiently carried out. Up to the present only two Local Authorities have provided proper Infectious Diseases Hospitals, namely, the Cape Town Municipality and Grahamstown. The former has had an Infectious Diseases Hospital in operation for some considerable time past. In the case of Grahamstown, an Isolation Hospital—the Victoria Fever Hospital—has recently been erected by funds raised by a local Committee supplemented by contributions from Government, the site being granted by the Board of Management of the Albany General Hospital, Grahamstown. It is proposed to manage and administer the Institution in connection with the Albany General Hospital, but it would appear that as yet no arrangement has been come to with the Grahamstown Municipal and Divisional Councils regarding the treatment of cases of Infectious Disease occurring within their respective areas, and the maintenance of the Hospital. Schemes and proposals for the erection of Infectious Diseases Hospitals are at present being considered by the Kimberley Board of Health, the Municipality of Oudtshoorn and the Claremont Municipality. In this connection, attention may be drawn to Colonial Office Circular No. 34 of 1898, which notifies that Government will be prepared to consider the question of contributing towards the cost of construction of such Hospitals on the £ for £ principle. It should also be borne in mind by Local Authorities that under the Public Health Acts, any two or more such Authorities may combine to provide Infectious Diseases Hospitals, an arrangement which is frequently both convenient and economical.

Disinfection of Infected Articles.

One of the most important duties falling upon Local Authorities is the efficient disinfection of clothing, bedding, and other articles which have been exposed to infection, and in order to carry out such disinfection the provision of proper means and facilities is essential. Up to the present only a small proportion of even the Urban Local Authorities have provided such means.

For large Urban centres the best form of apparatus is one in which disinfection is carried out by steam under pressure, as in the "Equifex" or "Washington-Lyon." For smaller areas the "Thresh" Disinfector is well suited.

As in the case of Isolation Hospitals, two or more Local Authorities may combine to provide Disinfecting plant, and Government is prepared to consider an application for a contribution towards the cost of the plant and necessary buildings.

15.—PORT HEALTH WORK.

The Port Health Officers.

Much Health work was performed during the year in connection with the Colonial Ports. For long past it has been my object to create a reliable and efficient Port Health Service equal to that in existence in England. The ideal I have worked for is to ensure that the country is efficiently protected from invasion through its Ports by infectious disease, while at the same time no unnecessary restrictions or delays are imposed on the travelling public, the commercial community, or the shipping interests. To this end the obsolete and repressive measures formerly adopted under the name of "Quarantine" have been more or less abandoned, reliance being placed upon an efficient inspection coupled with the co-operation of Masters and Ship Owners trading to the Ports.

In this work some difficulty was originally experienced owing to the want of capable Port Health Officers who recognised the responsibility of their work, and could be relied upon to properly carry it out. Improvement, however, in this direction has been gradually taking place. Thus a Government Officer, whose entire time is practically devoted to the work, has been appointed in connection with the Cape Town Docks, while another very competent Official has been appointed at East London, who is wholly employed on Government work connected with the Port and the District Surgeoncy.

At Port Elizabeth, the Medical Officer discharging the duties of District Surgeon and Port Health Officer is allowed private practice, although, in effect, he gives the greater portion of his time to his official duties. Nevertheless, I am of opinion, that here also the Officer should be required to devote his whole time to the Government work, which is more than enough to fully occupy him.

At Mossel Bay, the next most important Commercial Port of the Colony, the late District Surgeon and Port Health Officer having retired, I hope the Government will see its way to appoint a whole-time Officer, or, at any rate, one whose private practice is limited to the precincts of the Town. During the year the duties of the Port Health Officers have been defined in a Code of Instructions which provide for all possible contingencies. These have been approved by the Minister, and are now in course of being applied. They should be of much assistance in the proper carrying out of the work.

The Administration of "The Immigration Act, 1902."

On the 1st February, 1903, the additional duty was placed on the Port Health Officers of carrying out the provisions of the Immigration Act, 1902, at the Ports. The Government decided on this step in view of the fact that by combining the duties of Port Health Officer and Immigration Officer the work under both these heads could be carried out simultaneously by the Port Health Officer, thus resulting in greater despatch to vessels and in economy to the country. This expectation has been fully justified, but as it is inadvisable, for the sake of good adminis-

tration, to place Executive Officers under the control of two Departments, it resulted that the Administration of the Immigration Act was placed under the Medical Officer of Health for the Colony, under whose control the Port Health Officers were bound to remain.

In accepting the responsibility of administering this Act, I have endeavoured to successfully carry out the work. At the same time, I am bound to confess that it has entailed a very considerable labour both on myself and my Staff. For, as must happen in the case of a new legislative departure of this nature, the details of its administration and application had to be evolved *ab initio* as we went along, and Forms, Instructions and precedents created as the need arose. This portion of the work is now practically completed, and will not have to be done over again, so that the administration of the Act will be less onerous than heretofore. At the same time the work and responsibility must always be considerable if the Act is to be enforced efficiently and without unnecessary hardship.

While I am always willing to carry out any work which the Government may assign to me, I cannot help feeling that this matter should not be placed upon the Medical Officer of Health for the Colony. On the other hand, I am equally certain that, if the executive work is to be performed by the Port Health Officers, it is essential for the safety of the Public Health that they be not removed from the sole control of the Medical Officer.

I have already submitted a full report on the working of the Act for the year 1903, which has been presented to Parliament.

Vessels from Plague-infected Ports

During the year special attention has been given, as heretofore, to all vessels arriving from Plague-infected Ports and from Eastern Ports generally, in order to ensure their freedom from Plague-infection. Only in three instances was such infection discovered, the three cases being those of the steamship "Nevasa," in Table Bay, from India and East Coast Ports, on the 6th March, 1903; the ship "Cromartyshire," from Tacoma, on the 27th April, 1903, lying in the Harbour at East London, and the coasting steamer "Agnar," on the 16th November, 1903, in the Cape Town Docks.

Plague on the S.S. "Nevasa."

With regard to the "Nevasa," this vessel afforded a most instructive example of the value of careful Port Health work. She was a cargo and Coolie ship, and left Bombay on the 22nd January, 1903, touching at various Eastern Ports en route to South Africa. She called at Beira on the 16th, Delagoa Bay on the 21st, and Durban on 22nd February, arriving at Cape Town on the 3rd March. She carried a cargo of teak wood, cocoa-nuts and soda, 100 Asiatic passengers, and a crew of 65 Asiatics under European Officers.

On arrival in Table Bay she was inspected by the Port Health Officer, who found the crew all well, and received a statement from the Captain and Doctor, the latter being a Hindu, that the only cases of illness which had occurred during the voyage were a few Malarial rises of temperature among the passengers and crew, and the death of an infant, three months old, from Marasmus. Pratique was accordingly granted. Three days later, however, on the morning of 6th March, it was found that a death had occurred on board in a boy, a member of the Asiatic crew. It was stated that he had been at his work on the previous day, became un-

well towards evening, had convulsions, and died suddenly at 3 o'clock in the morning. The Port Health Officer, on examining the body, found an abrasion in the right groin, which was stated to have been caused during the convulsions. Although there was nothing else suspicious he decided to hold a *post-mortem* examination on the body, and the corpse was accordingly brought ashore for the purpose. This examination disclosed the fact that death was due to Plague.

Steps were at once taken to isolate the vessel and all persons on board, and also to trace the whereabouts of any of those who had landed. Inasmuch as Cape Town was at that time free from Plague, popular feeling necessitated the removal of the vessel to the Quarantine Station at Saldanha Bay, where the patients were landed and she was henceforth dealt with until free from infection.

Careful enquiry on board elicited the positive statement that no mortality of rats had been noticed by anyone. Nevertheless, fumigation by the Clayton Apparatus was carried out, and as a result a number of dead rats were discovered, among which several were found to be Plague-infected. Several days later, numbers of other rats were found, a large proportion of which proved to have been Plague-infected. After the completion of operations and the release of the vessel, some members of the crew admitted that dead and sick rats had been noticed by those on board for several weeks prior to the outbreak of Plague among the persons on board, and it is therefore clear that this vessel had been Plague-rat infected during the whole of the time that she was calling at South African Ports.

Following on the first case of Plague above-mentioned, four other cases occurred, all among the Asiatic members of the crew, making in all five cases, with three deaths. All the cases were removed from the vessel for treatment to the Quarantine Station at Saldanha Bay, and the vessel released from quarantine on 30th March. The last patient, however, was not discharged until the 31st of May.

This case particularly illustrates the difficulty that has to be contended with in dealing with infectious diseases on board of vessels and especially with Plague, which attacks their rodent as well as their human freight.

In the face of the statements made by the Officers on board, no practicable means existed for discovering that the rats on the vessel were Plague-infected, and, indeed, the discovery would never have been made had not the crew themselves been attacked.

It is also of interest as an indication of the time which may elapse between the infection of the rodent population and the spread of the disease to human beings. It is curious to note how that, once it did spread to those on board, the disease attacked within the short period of twelve days no less than five persons, while doubtless other cases would have promptly followed had not measures been taken. In this connection reference may be made to the case of the S.S. "Antillian," which left Cape Town on the 1st February, 1901, presumably with Plague-infected rats on board, and on board of which the first human case of Plague occurred on the 27th February.

Another case is that of the Sailing Vessel "Lingard," which left the Port of East London shortly after the first discovery of Plague among the rats there. According to information received, a case of Bubonic Plague occurred in a member of the crew thirty-two days after the departure of the vessel from East London, a second case developing on the thirty-seventh day out. The vessel arrived at Banbury, Australia, a few days later, the second case dying directly she arrived. The first was landed and the vessel disinfected, large numbers of dead and Plague-infected rats being found during the disinfecting operations.

Plague on the Ship "Cromartyshire."

The ship "Cromartyshire" arrived at East London from Tacoma, on 27th April, 1903, with a cargo of wheat and flour, and was immediately given pratique by the Port Health Officer. She entered the River, where she was moored outside a steamer at the wharf, and discharged a considerable part of her cargo into lighters. On the 8th June she was moored directly alongside the wharf and continued to discharge her cargo, shields being placed on the mooring cables and the usual precautions being taken to prevent the migration on board of rats from the shore. There had some four months previously been a heavy mortality from Plague among the rat population of the Harbour Board area, and, from the occasional discovery of Plague-infected rats in the neighbourhood, it was known that the infection still persisted.

On 4th August an offensive smell was noticed in one of the holds, and on a search being made a number of recently dead rats were discovered; bacteriological examination proved these to be Plague-infected. The vessel was immediately moored in midstream and disinfected, first by burning sulphur and subsequently by fluid disinfectants. The cargo still to be discharged—some 400 tons of wheat and flour—was also dealt with, the bags of wheat being emptied, the sacks passed through a steam disinfector and the wheat re-bagged. It was found impracticable to similarly treat the flour; this was carefully overhauled and such sacks as had been exposed to contact with rodents, or which showed marks of rats or rat discharges, were treated with Formalin solution. The cargo which had previously been landed, except a part of it which had been discharged shortly after the vessel's arrival and before there was any reason to suspect infection of the vessel and which had already been forwarded up-country, was similarly treated. During disinfecting operations on the vessel, over 100 Plague-infected rodents were found dead or destroyed. No person on board the vessel contracted the disease; it may be mentioned that all had been inoculated with Haffkine immediately on the discovery of the infection of the rats on board. The disinfection of the vessel was completed on 4th September, and on 9th September she was given a Clean Bill of Health and sailed for Sydney, New South Wales.

Plague on the S.S. "Agnar."

The "Agnar," a small coasting steamer trading principally between Table Bay and Knysna, arrived in Table Bay on 10th November, 1903, from Knysna, which Port she had left two days previously.

Plague-infected rats had been discovered in Knysna on 1st October, 1903, and it was known that infection still existed among the rodents at that Port. On arrival of the vessel at Cape Town she was searched in the usual course by Rat-catchers under the direction of the Port Health Officer, special attention being paid to the vessel in view of the fact of her coming from a Plague-infected Port, but nothing suspicious was discovered. A live rat was caught on board on 13th November and another three days later; both were examined in the Public Health Laboratory and found free from Plague.

On the evening of the 16th November the carcass of a rat was handed to a Government Rat-catcher at the Docks by a coloured boy, who stated he had found it on the "Agnar." This carcass, on being examined in the Public Health Laboratory, proved to be Plague-infected.

The vessel was immediately placed in quarantine, cleared of cargo, and fumigated with the Clayton Apparatus. After fumigation, the carcasses of six rats and thirteen mice were discovered on board, but were, on examination, found to be free from Plague. No further evidence of infection was discovered on board, or in the cargo brought by the vessel from Knysna.

Measures for Dealing with Rats and Shipping.

The matter of dealing with rodents on board of vessels is one of supreme importance in connection with Plague prevention, but it is, at the same time, one of the most unsatisfactory problems which the Port Sanitarian has to face.

At the present time, two lines of procedure are usually acted upon by Authorities in this matter. One is, the adoption of measures in order to prevent the migration of rats between vessels and the shore in either direction, and the other, to destroy all rodents on board of every vessel entering the Port from Plague-infected places.

Both of these measures are more easily conceived than carried out.

Methods for Preventing Migration of Rats.

In the case of the prevention of the migration of rats, several means are advocated and are adopted at different Ports elsewhere. These may be briefly enumerated as follows:—

- (a) The tarring of all hawsers, gangways, planks and other communications between the ship and the shore.
- (b) The blocking up of hawseholes.
- (c) The placing of a shield or other obstruction on hawsers to prevent the passage of rats.
- (d) The hanging of lights at night time along the side of the vessel next the quay.
- (e) The employment of a watchman to patrol up and down the quay, who is supposed at intervals to frighten away the rats by the making of noise.

I can unhesitatingly say that all these methods are either entirely useless or impracticable.

Careful experiments with regard to the tarring of ropes and the use of discs and other mechanical appliances to hawsers have been carried out by Drs. Mitchell and Robertson, of this Office, which have demonstrated their entire futility as at present designed. A large number of differently constructed appliances have been made and tested, together with a number of shields which had been used in Indian and other Ports, but one and all have failed. A suitable appliance for fixing to hawsers still remains to be devised. An account of these experiments will be found in the report of the Bacteriological Assistant printed in Annexure "F" of this Report.

As to the system of lights and watchmen, this, of course, could be made efficacious, provided a sufficient number of reliable watchmen could be provided, but, in practice, this is impossible owing to the expense, except in very special cases.

Precautions taken at Ports to Prevent Infection by Rodents from Shipping.

At least in so far as the Ports of this Colony are concerned, practical experience has hitherto gone to show that the only really effective safeguard against the introduction of Plague by rodents from Shipping is to

promptly and thoroughly search all arriving vessels for evidence of sickness or mortality among the rodents on board. In carrying out this measure, special attention is, of course, paid to vessels which have called at any Plague-infected Port within the three months preceding arrival. Vessels are, whenever practicable, thoroughly searched while in the roadstead or before being moored at the wharves, by experienced Rat-catchers, under the supervision of the Port Health Officer. Any rodents caught or carcasses discovered are forthwith submitted to bacteriological examination. Traps are laid after the first search, and any rodents subsequently caught while the vessel is in Port are similarly examined.

The Public Health Acts make no provision for requiring the Master of every vessel arriving at any Colonial Port—even in the case of a vessel arriving from a Plague-infected Port—to furnish a Certificate to the effect that no suspicious sickness or mortality has recently been observed among the rodents on board. Advantage has, however, been taken of the powers conferred by Section 15 of the Public Health Amendment Act No. 23 of 1897, under which a Regulation has been promulgated by Government Notice requiring the immediate notification of any suspicious or unusual mortality or sickness amongst rats, mice, cats, dogs or other animals liable to be affected by Plague, within both the land limits and territorial waters of the Colony. Steps are at present being taken to introduce a Certificate under this Regulation which the Master of every vessel arriving at any Colonial port will be asked to sign, to the effect that no such mortality or sickness has been observed among the rodents on board his vessel within the three months immediately preceding.

Methods of Destruction of Rats on Shipboard.

With regard to the second measure, namely that of entirely destroying all rodents on board, here also two systems have been advocated. Although one of these is fairly efficacious, it cannot, on practical grounds, be systematically applied. The different systems are as follows:—

(a) That of fumigating the holds with Carbon Dioxide Gas. This method has the sanction of Professor Simpson, who strongly advocates its employment in his numerous writings on the subject.

The method consists in the manufacture of Carbon Dioxide Gas by acting upon Chalk with Sulphuric Acid; the Gas, being heavier than the atmosphere, is supposed to sink to the bottom of the holds and to kill by suffocation the rodents there collected. I have practically tested this method and have found it entirely unsuccessful, nor in my opinion could any other result be expected.

The Clayton Method.

(b) That known as the Clayton Method, which consists in the generation of nascent Sulphur Dioxide Gas by the burning of Sulphur in an enclosed chamber with a forced draught; the Gas is forced by means of a fan into the closed holds of the vessel, the air in the holds being at the same time simultaneously extracted by a second fan, the entire operation of sulphuring the vessel being completed as soon as the appropriate test demonstrates the fact that the air that is being withdrawn from the holds contains 3 or 4 per cent. of Sulphur Dioxide.

A Clayton Apparatus has been imported by the Table Bay Harbour Board, and the system has been thoroughly tested; there is no doubt that the results are, so far as the destruction of rats and other vermin on board is concerned, and in the case of cargo boats, satisfactory. We have never yet, however, dared to apply it to a passenger vessel, or to a vessel with

full general cargo, for the reasons that, in the first place, it can only be applied to those portions of the vessel which can be rendered moderately air-tight, and which can be entirely evacuated of all human beings; and, in the second place, it has an injurious effect on certain articles.

In the above-mentioned report of the Bacteriological Assistant will be found a detailed statement of its effect on different kinds of articles, dyes, etc. Broadly speaking it may be stated that it is injurious to bright metal goods and especially bright polished steel goods and to electro-plated articles, which are permanently ruined, unless thoroughly protected; it also injures certain dyes in soft goods and it destroys the germinating properties in cereals, while it renders flour entirely incapable of "rising." This latter effect is most curious and interesting. A number of loaves of bread made from flour that had been contained in a bag placed in the hold of a vessel treated by this method were literally harder and more solid than bricks, although control experiments made at the same time with ordinary flour under similar conditions produced excellent loaves.

It would appear that the fumigation of vessels by the Clayton Apparatus is an effective means of destroying rodents and possibly also most of any infection on board of a vessel that is suitably situated for the application of the Gas. At the same time, as a routine means of freeing from rats all vessels arriving at the Port, it cannot be considered a practicable method, for, quite apart from the time which it takes to apply, namely, at least twenty-four hours, vessels with cargo and passengers on board could not well be subjected to the process, except in case of urgent necessity. Its practical rôle in the destruction of rats appears to be in the fumigation of vessels at their original Port of departure and before the vessel loads cargo. It might be possible, for example, for arrangements to be made at Ports of departure for the periodical destruction of rats by this means, and for the vessel thereupon to be furnished with a Certificate of this having been done. This, however, would not free the vessel from the suspicion of having subsequently shipped infected rats at some Plague-infected Port afterwards called at—a risk which is by no means remote. In proof of this I may revert to the four instances which are known to have occurred of vessels calling at Cape Colonial Ports since the commencement of Plague in the Colony, and thereby getting Plague-infected rats on board, namely, the "Cromartyshire," "Lingard," "Antillian" and "Agnar," all of which have already been referred to.

There is another drawback against the use of this apparatus so far as we are concerned in this Colony, which is the excessive cost of its use. For example, the cost of fumigating the "Nevasa" amounted to £133 6s. 9d.

16.—THE PUBLIC HEALTH LABORATORY.

In connection with the Office of the Medical Officer of Health for the Colony, a small Public Health Laboratory has been established. This was started in 1901 at the time that Plague broke out in the Colony. Such a Laboratory is an essential in connection with any Health Department, as without its assistance it is quite impossible to carry on Public Health work. Moreover, to be of full service such a Laboratory must be under the direct control of the Medical Officer of Health, so that he is personally able to follow and keep in touch with investigations upon which the nature of the measures that are to be taken have to be decided.

In this connection I have to express my personal thanks to Dr. George W. Robertson, the Bacteriological Assistant, to whose skill I am much indebted for guidance on many occasions when the action to be taken depended upon difficult bacteriological diagnoses.

A large number of bacteriological examinations have also been made for Medical Practitioners in connection with the diagnosis of Typhoid Fever, Diphtheria and other infectious diseases.

Also many waters have been bacteriologically examined and reported upon for Local Authorities in connection with Sanitation and proposed water schemes.

Printed under Annexure "F" will be found a detailed report by Dr. Robertson of the work performed by him in the Health Laboratory, to which I would refer the reader for fuller information.

17.—GOVERNMENT AND STATE-AIDED HOSPITALS.

The subject of Government and State-aided Hospitals and allied Institutions, with which may be associated the question of Government Pauper and generally, is a very large and important one. A considerable portion of the Public Revenue is annually devoted to meeting expenditure connected with these objects, but, hitherto, no information appears to have been collected with the view to ascertaining what sum in the aggregate is being thus expended from the Public Treasury; to what extent it is being supplemented by voluntary contribution by the Public; what results are being obtained for the expenditure; whether those results are adequate or fall short of requirements, and what checks and safeguards are in operation or can be adopted for ensuring that the money is satisfactorily expended.

It is impossible to deal fully in this Report with all these matters; for one thing the necessary information is not available, and for another, many of the questions can only be disposed of by an Authority endowed with adequate powers for the purpose of supervising the Governing Bodies expending the money. There is, however, a considerable amount of information that can at present be advantageously brought together, and this I propose to consider.

Inspections of Hospitals.

The necessity for having such information before it has been recognised by Parliament, and during the Session of 1903, in the course of the Debates on the Estimates, the opinion was strongly expressed that a Report by the Medical Officer of Health for the Colony should be laid before Parliament before undertaking the consideration of the Votes relating to Grants to Hospitals and Asylums. It is true that for years past a collection of Reports, drawn up on no uniform basis and sent in by the different Hospital Governing Bodies, has been annually presented to Parliament, but these Reports are of little practical value for the purpose I have mentioned.

Hitherto the Medical Officer of Health has not been in a position to make such a Report, but acting on these expressions of opinion and with the authority of the Minister, he caused, during the latter half of 1903 and the first portion of the present year, all State-Aided and allied Institutions to be Medically inspected.

The making of these Inspections was assigned to Dr. Mitchell, Assistant Medical Officer of Health for the Colony, and to Dr. Rees, Medical Inspector of the Department, certain general lines on which the enquiries were to be conducted being laid down for the purpose of obtaining uniformity of information. This work entailed a very large expenditure of time, amounting in the aggregate to some four or five months' continuous application of one Officer.

The following were the Institutions inspected:—

<i>Name of Institution.</i>	<i>Inspected by.</i>	<i>Date of Inspection.</i>
Chronic Sick Hospital, Grahamstown.	Dr. J. A. Mitchell.	24th Aug., 1903.
Albany General Hospital, Grahamstown.		25th Aug., 1903.
Victoria Fever Hospital, Grahamstown.		27th Aug., 1903.
Queen's Central Hospital, Cradock.		31st Aug., 1903.
Midland Hospital, Graaff-Reinet.		3rd Sept., 1903.
Frontier Hospital, Queenstown.		7th Sept., 1903.
Frere Hospital, East London.		23rd Sept., 1903.
Butterworth Cottage Hospital.		2nd Oct., 1903.
Umtata Cottage Hospital.		6th Oct., 1903.
East Griqualand and Ussher Memorial Hospital, Kokstad.		10th Oct., 1903.
Grey Hospital, King William's Town.		19th Oct., 1903.
Provincial Hospital, Port Elizabeth.		27th Oct., 1903.
Victoria Memorial Hospital, Port Elizabeth.		29th Oct., 1903.
Royal South Western Hospital, Oudtshoorn.		10th Nov., 1903.
Rondebosch and Mowbray Cottage Hospital.		2nd Feb., 1904.
Suburban Hospital, Woodstock.		7th March, 1904.
Victoria Cottage Hospital, Wynberg.		9th March, 1904.
Eaton Convalescent Home, Plumstead.		11th March, 1904.
Somerset Hospital, Cape Town.		15th March, 1904.
Free Dispensary, Cape Town.		25th April, 1904.
Victoria Hospital, Mafeking.	Dr. D. C. Rees.	10th Dec., 1903.
Vryburg Hospital.		11th Dec., 1903.
Klipdam River Diggers Hospital.		14th Dec., 1903.
Klipdam Scurvy Hospital.		14th Dec., 1903.
Barkly West Hospital and Convalescent Home.		15th Dec., 1903.
Kimberley Hospital.		16th Dec., 1903.

The following Hospitals have not yet been inspected:—

Uitenhage Cottage Hospital.
 Old Somerset Hospital, Cape Town.
 Casualty Hospital, Cape Town.

Annual Reports on Hospitals.

As a result of these inspections, a most valuable and instructive series of Reports have been prepared by the Inspecting Officers. I regret that it has been decided not to print these Reports for public information, as they are not only of service in putting on record a complete history and description of all the different Hospitals of the Colony, with their methods

of management, but would, I think, be useful to Parliament, to the Public and to the Hospital Authorities themselves, by enabling a comparison to be made between the methods adopted in different Hospitals and the results obtained together with their cost. However, I am able to incorporate a Memorandum which I have invited Dr. Mitchell to prepare, detailing a number of conclusions on the subject of the internal administration of Hospitals, which he has arrived at as a result of the numerous inspections he has made. This Memorandum will be found printed as Annexure "E" hereto. It is, however, impossible to summarise the information and recommendations contained in the individual Reports.

I am of opinion that these inspections should be carried out annually for the future, special attention being given to the extent of the measures taken by the Governing Bodies for effecting improvements indicated as being necessary in Reports of previous inspections.

Duty of Government to guide Hospital Management.

It is obvious that a very great responsibility devolves on the Government to ensure that adequate results are obtained from the continued expenditure of such large sums of public money; at the present moment the Government is not in a position to do this. Contributions towards Hospitals are annually voted by Parliament, but no machinery exists to ensure that the large sums so furnished are administered economically and to the best advantage.

Personally, I think that all due economy and care is at present exercised by the different bodies of public-spirited men who manage these Institutions, but I think it would be better if some machinery existed whereby, if such were not the case, the fact would at once become evident.

Review of Hospital Work in the Colony.

In connection with these inspections great care has been taken in order to obtain some comprehensive details of the work performed, of the administration, and of the financial condition of each of the Government and State-Aided Hospitals and kindred Institutions of the Colony. Some difficulty was experienced in regard to this matter, owing to the different basis upon which the accounts of different Institutions are kept, and the fact that, in some of the Institutions, records on many important points are not kept at all. In such cases the information had to be worked out at great labour from such sources as might be available.

In Annexure "D" will be found certain Returns, numbered 1 to 9, in which the above-mentioned details, for the year ended 31st December, 1903, have been collected for all the different Institutions, and set out in a tabular form, so that an easy comparison can be instituted between the administration, work and financial position of the different Institutions.

In Table 1 will be found information regarding patients treated in each Institution.

Table 2 contains details of the staffs employed at the different Hospitals.

Table 3 displays the amount of the ordinary and the extraordinary receipts for the year in the case of each Hospital, and the proportion thereof contributed by the General Public, Paying Patients, Public Bodies, the Government, and from other sources, respectively.

In Table 4 is a return of ordinary expenditure of each Hospital for the year, grouped under certain main heads of Administration.

Table 5 shews the average daily cost per patient in each Institution,

and compares it with the tariff of charges made by the Management in respect of the different classes of patients.

Table 6 shows for each Hospital the average daily cost per patient in respect of the main heads of expenditure, with the proportion contributed by the Government, and from other sources of revenue, respectively.

In Table 7 is a Return of extraordinary expenditure of each Institution during the year.

In Table 8 is a Return of new works projected by the different Hospitals, with their estimated cost and the means available for meeting the expenditure.

Table 9 furnishes, as far as can be ascertained, a statement of the financial position of each Institution at the end of the year 1903.

It is obviously quite impossible to analyse these important Returns in a short Report of this nature, nor is it necessary to do so. Those who desire to study the relative positions to one another of the different Institutions as regards work performed, extent of the staff employed, cost of working, receipts and expenditure and general financial position, can best do so by consulting the Returns themselves.

A brief summary may, however, be of service in demonstrating the scope and extent of the Hospital work of the Colony and its annual cost.

The Year's Total of Patients.

During the year 11,406 patients were under treatment as indoor patients; 10,397 being treated in State-Aided Institutions; and 1,009 in Government Hospitals; 6,525 of these were treated entirely free; 4,029 were paying or contributing patients; and 852 were Government Chronic Sick patients. Excluding the Chronic Sick each of these patients was under treatment for an average of 27·32 days. The greatest average stay in Hospital of the patients, excluding, of course, the Chronic Sick, was 39·20 days, in the case of the Queenstown Frontier Hospital, and the shortest 12·11 days in the Umtata Cottage Hospital. The average of the Somerset Hospital was 27·40 days; of the Provincial Hospital, Port Elizabeth, 27·50; the Kimberley Hospital, 30·50; and the Frere Hospital, East London, 19·44 days.

The largest General Hospital is that of Kimberley, with 318 beds, and a yearly total of 2,171 patients. This is followed by the Somerset Hospital, with 191 beds and 2,371 patients; next comes the Provincial Hospital, Port Elizabeth, with 155 beds and 1,640 patients. The Old Somerset Hospital exceeds all of these Hospitals, having 453 beds.

It would appear that some of the Hospitals are unnecessarily large for the district they serve, thus for example the Midland Hospital, Graaff-Reinet, only treats two patients to a bed per annum. The Somerset Hospital treats 12·4 patients to each bed per annum.

Cost per Patient.

The average cost of each patient during the year, excluding Government Institutions, amounted to 6s. 7·12d.; of this amount 2s. 6·09d. was borne by the Government.

It is not altogether fair to institute any minute comparison between the average cost in the different Institutions, as the smaller the Hospital the more expensive is the relative cost of maintenance; moreover there is a wide difference in the local cost of supplies. These factors, however, only operate within limits, and therefore a broad comparison may safely be made. The most expensive management was that of the Vryburg Hospital, with an average daily cost per patient of 12s. 2·96d.; the

cheapest was the Butterworth Cottage Hospital, with 3s. 11·26d.; Somerset Hospital was 6s. 5·55d.; Port Elizabeth, 5s. 8·07d.; Albany General, 7s. 2·01d.; and Graaff-Reinet, 11s. 8·03d.

The proportion per patient contributed by Government also varies very widely and bears no decided relation to the whole cost. The proportion is 2s. 11·10d. in the case of the Somerset Hospital; 2s. 8d. at Port Elizabeth; 4s. 9·51d. in the Albany General; and 6s. 10·20d. per diem at Graaff-Reinet.

I am of opinion that as a general rule the average daily cost should not exceed 6s. per diem; 11s. 8·03d., as at Graaff-Reinet, is most excessive.

Of the Government Institutions the Grey Hospital, King William's Town, at 6s. 6·24d. per patient per diem appears excessive considering its standard of administration. The cost in the cases of the Chronic Sick Hospitals is low; being only 1s. 10·25d. in the case of the Grahamstown Chronic Sick, which grows its own vegetable produce, and 2s. 0·08d. in the case of the Old Somerset Hospital.

Total Annual Cost for Hospital Maintenance.

The total Ordinary Expenditure for the year 1903 was £92,511 15s. 7d., in the case of the State-Aided Institutions, and £22,747 2s. 4d. for the Government Hospitals, or a total of £115,259.

The total Ordinary Revenue of the State-Aided Institutions amounted to £100,507 6s. 9d. for the year. Of this amount £38,219 11s. 8d., or 38·03 per cent., was provided by Government; £20,019 2s. 10d., or 19·92 per cent., was contributed by the General Public; £1,750, or 1·74 per cent., by Public Bodies; £23,723 9s. 2d., or 23·60 per cent., was obtained from Paying Patients, and £16,795 3s. 1d., or 16·71 per cent., from other sources.

In the case of the Government Institutions the whole of the expenditure, with the exception of some small receipts from patients, was defrayed from the Public Chest.

The total Extraordinary Revenue amounted to £22,771 12s. 11d.; of which £7,360 14s. 8d. was provided by special Government grants.

The Extraordinary Expenditure during the year amounted to £19,649 8s. 4d. The special undertakings upon which the expenditure was laid out are set forth in Table 7 of the Annexure. In this connection Table 8 should also be consulted, wherein will be found detailed the estimated cost of works projected.

Statement of Hospital Assets and Liabilities.

An attempt has been made to construct a statement of the Assets and Liabilities of each State-Aided Institution, as on the 31st December, 1903, and, so far as the materials are available, it is believed that the Return under Table 9 is correct.

Unfortunately, however, most Hospitals have hitherto not been in the habit of compiling this very important statement. There is no doubt that the rendering each year of a correct Return of this nature, upon a uniform basis to be approved of, should be made obligatory in the case of every State-Aided Institution. This matter is dealt with at length in the special report of Dr. Mitchell, printed in Annexure "E."

The Improvement of Hospital Management.

From my experience I have formed the opinion that in many important respects Hospital Management could be much improved. In ex-

amining the administration of one Hospital, I have often been struck with good points in the administration which might advantageously be adopted by the other Hospitals of the Colony, but which have not been taken over by them owing to their not being aware of what is being done in kindred Institutions. There are, however, some few matters in which improvement could be made in regard to all Hospitals of the Colony.

The following are some of the points upon which I think that General Hospital Management might be improved. In making these suggestions, I need hardly say that I do so in no contentious spirit of criticism; on the contrary, I am impressed, as, indeed, anyone intimately acquainted with the Colonial Hospitals must be, with the extent and excellence of the work generally that has been accomplished by Boards of Management throughout the Colony, often under circumstances of great difficulty and without the light of previous experience to guide them.

A Hospitals Management Act required.

In the first place, some Legislation is necessary, and I think a Hospitals Management Act should be passed by Parliament. Such an Act should be based upon the principle that a large proportion of the Funds by which these Institutions are maintained is provided from the Public Chest, and, therefore, that some measure of control must be provided in order to safeguard the expenditure of these Funds. The provisions of such an Act should be elastic and adapted to the different conditions under which different Institutions have to be run. It should deal, among other things, with the following matters:—

Constitution of Hospitals.

(1). The General Constitution of Hospitals should be put on an improved and more uniform basis. At the present time some Hospitals are constituted by Act of Parliament, and their Constitution is unnecessarily rigid, admitting of no modification to meet altered requirements. This is at the present moment the case with the Frere Hospital at East London, where it is desired to make some very necessary alterations in the formation of the Board of Management, but this cannot be done owing to its Constitution being defined by Act of Parliament. On the other hand, it not infrequently happens that the Constitution is so loosely framed that a Board of Management alters it in fundamental particulars by means of a simple resolution of its own, and without any confirmation by either the Minister or Subscribers.

(2). There are certain general lines which should be defined upon which all Boards of Management of Hospitals should be constituted, as for example, the rights of Life Governors; the system of representation of Subscribers; the representation on the Board of the Visiting Medical Staff, and the provision for the representation of Government. With regard to this last, it is desirable that the Civil Commissioner of the District be in every case an *ex officio* member of the Board; but, in addition to this, the Government should have the privilege of nominating representatives to the Board not necessarily, or, indeed, preferably, Government Officials, in number proportionate to the whole number of other members, but in no case to exceed one-third of the whole membership of the Board.

The Framing of Regulations.

(3). The working of every Hospital should be controlled within certain limits by Regulations, and such Regulations should deal with certain matters on recognised and well-defined lines. Such Regulations should, as

near as possible, be uniform for the different kinds of Hospitals throughout the Colony. They should be framed by the Board with power to alter and amend from time to time, but all such Regulations and amendments should be submitted for the approval of the Minister before coming into force.

Government Control.

(4). A reasonable, but by no means extensive, amount of control should be vested in the Government. This control should, except in special cases, be more of the nature of power to veto rather than of active interference, and its lines should be clearly laid down.

Audit and Inspection.

(5). Provision should be made for the Audit of Accounts by the Auditor-General. Also the annual accounts of all Hospitals should be kept upon a uniform basis and in a form to be approved of by the Minister. Such accounts should include in regard to every Hospital a statement of Revenue and Expenditure separated under definite heads, and also a clear statement of Assets and Liabilities, also classified under recognised headings. All Hospital Accounts should be required to close annually on a uniform date, and to be rendered within a reasonable period thereafter. On this matter there will be found some valuable suggestions in the attached Memorandum by the Assistant Medical Officer of Health for the Colony.

(6). The Minister should have the power to cause the inspection of every Hospital, and such inspection should be carried out periodically, so far as the Medical Administration is concerned, by the Medical Officer of Health for the Colony, or his Deputy, and, with respect to Accounts, by the Accounting Officer of the Colonial Secretary's Office, or his Deputy.

Official Visitors.

(7). Also Official Visitors should be appointed by every Board of Management, whose duty it should be to periodically and at frequent intervals inspect the internal working of the Hospital, and to report in writing, thereon to the Board for its information and guidance at each regular meeting. Such Inspectors should be entirely free and untrammelled, and should not themselves be directly responsible for any of the details of administration; they should preferably be laymen.

The Purchase of Supplies.

(8). It should be laid down that, in the case of every Hospital, Tenders should be publicly called for all Supplies, except articles urgently required or of inconsiderable value. At the present time this procedure is, in many cases, neglected by Boards of Management, without there being any adequate reason for the omission.

Expenditure on permanent works should not be undertaken without the approval of the Minister. Many instances have come under notice of works of this nature having been carried out which have subsequently been found to be useless.

In connection with this matter, I would draw attention to the very great convenience and saving of expense to Hospitals which would result if they combined for the purchase of Drugs through one central system. The question of the supply of Drugs and Appliances to Government Institutions and State-Aided Hospitals is a very large and important one, and from a somewhat considerable experience I am sure that not only

would greater efficiency be attained, but a very large financial saving would result from the establishment of such an organisation. Importations should be admitted free of duty. These Institutions are not rated by the Local Authority, and they should not be taxed by the Government.

Contributions by Patients.

(9). An adequate system should be insisted upon by which charges are made to patients who are able to pay, and by which such charges are duly collected or recovered. At present, many patients are treated entirely free who are well able to pay something towards their maintenance and to the up-keep of the Institution. In a Colony where there is a large proportion of young men without homes other than such as they find in Hotels or Boarding-houses, it is essential that places should be provided where they can be properly treated and cared for when overtaken by sickness; but it is unreasonable that such persons, who are often in receipt of fair incomes, should escape all expense of their treatment or maintenance while sick. I am, therefore, strongly of opinion that every such person voluntarily entering a Hospital should be required to contribute a reasonable amount within the limit of his resources for his maintenance. At the present time, many Hospitals require a guarantee to be signed by well-to-do patients, or by the friends bringing them to the Hospital, that they will defray the Hospital charges for their maintenance and treatment; but, unfortunately, many such persons leave the Hospital without defraying this expenditure, and afterwards the Management find it difficult or impossible to recover the money. In this way considerable sums, rightfully due to Hospitals, remain year by year outstanding, and, as a result, it frequently happens that the Hospital Authorities do not trouble to make any charge at all, except in cases where they feel practically certain of being paid the money.

I ought here to allude to the somewhat unsatisfactory basis upon which many Hospitals are at present conducted in regard to the admission and treatment of patients sent in by Members of the Visiting Medical Staff. It is not an uncommon thing at such Hospitals for the patient to pay his Medical Attendant, who is a Visiting Medical Officer, considerable fees for his Medical treatment while in the Institution, although he pays nothing, or only an inadequate contribution, to the funds of the Hospital itself for his maintenance and nursing while in the Institution. I fancy it would come as a surprise to many Subscribers to such Institutions to learn that, while their subscriptions were providing free maintenance in the Hospital of patients, such patients were paying to the Medical Officer accounts of magnitude for their Medical treatment in the Institution. This, to my mind, is not as it should be. The system under which a Visiting Medical Officer is allowed to charge Medical fees to a patient treated in a Hospital supported wholly or partly by Public Subscriptions or Government Funds is unsatisfactory. It is inadvisable that such Institutions should carry on the work properly belonging to a Private Nursing Home, although I recognise that, in this Colony, it is necessary that there should be some place where sick persons of means but without homes can go for Medical treatment; but if the system is to be allowed, then it should certainly be hedged round with such safeguards as will prevent abuse or loss to the Hospital. Therefore, I think it should be made a rule that in no case shall any Medical Officer of an Institution receive any fee from any patient treated by him in such Institution until such patient has paid the full charges of the Board for his maintenance and nursing while in the Hospital. Furthermore, no Medical Officer

should be permitted to charge any patient treated in the Hospital a fee without notifying on his admission the fact to the Board that such a charge is intended to be made.

Contributions by Public Bodies.

(10). Powers should be provided under which Municipal and other Public Bodies can contribute towards the maintenance of Hospitals which are situated in the District of the Public Body concerned or which afford treatment to persons living in such District. At the present moment, many Municipalities throughout the Colony are very properly desirous of contributing annually from their Revenue towards the upkeep of Hospitals doing good work in their District, but are debarred therefrom owing to the absence of legal powers enabling them to do so.

Prevention of Fire.

(11). Responsibility should be placed upon the Board for providing adequate means for the prevention and extinction of fire, and for the escape of Patients and Resident Staff should fire break out. In very few Hospitals are there adequate fire appliances maintained in an efficient condition, or are there sufficient, or often any, means of escape provided for use in the event of fire occurring. When it is remembered that many of the existing Hospital buildings are old and inflammable and that the heating and lighting arrangements are often of a dangerous kind, one shudders at the risks that are run and the thought of what would be the result should fire occur. To take such an example as the Albany General Hospital at Grahamstown, the buildings are old, and if fire occurred it would be at the best extremely difficult to subdue. Nevertheless, practically no means existed at the time of the inspection for coping with any such outbreak, beyond the provision of about a dozen empty fire buckets stacked in a pile on the balcony, while the means of exit from the upper Wards are practically confined to two narrow winding stairways in the centre part of the building, down which it would be impossible to convey patients with any hope of rapidly emptying the Wards.

Supervision and Repair of Buildings.

(12). The Chief Inspector of Public Works should be charged with the duty of supervising the buildings of all Government-Aided Hospitals, and he should cause periodical surveys to be made of their condition and state of repair, reports thereon to be submitted. Moreover, I am of opinion that advice on the subject of extensions of buildings and structural alterations thereto should be furnished by the Public Works Department through its Technical Officers free of cost to Hospital Boards of Management.

Other Suggested Improvements.

There are a number of other matters of great importance calling for improvement in Colonial Hospital Administration, but which would not fall within the scope of any Act or any Regulations framed thereunder, but which should be brought into general operation by the Government and Hospital Boards. These I will briefly enumerate, numbering them in continuation of the points I have dealt with above:—

Needed Improvement in Hospital Buildings.

(13). Much improvement requires to be made to existing Hospital Buildings. In quite a large proportion of cases, these buildings are unsuited to modern ideas of Medical and Surgical needs. I may instance such cases as the Somerset Hospital; the Woodstock Cottage Hospital; the Provincial Hospital, Port Elizabeth, and the Albany General Hospital, Grahamstown, where the Wards are badly designed, imperfectly lighted and ventilated; the floors old, worn and difficult to keep clean; the walls constructed of unsuitable, absorbent material; and, in fact, the whole structure transgresses the most important of the now accepted rules of Hospital Construction and Hygiene. Also in their sanitary arrangements many Hospitals are seriously at fault. For example, at the Albany General Hospital the water supply is inadequate; the sinks are badly constructed and badly placed; slop water is disposed of in an unsatisfactory manner, and there are only four bath rooms for 77 Patients, while for the Staff of Nurses and Attendants there are only two. Similarly, in the Midland Hospital, Graaff-Reinet, all closets and slop water discharge into cesspits placed in close proximity to the buildings and within a few yards of underground water tanks. One cesspit ventilated into the Operating Room. At the time of the War, when this Hospital was used by the Imperial Military Authorities, earth closets were erected by them on the Hospital premises, but since their departure the use of the cesspits has been reverted to. I could, from the Reports of the Medical Inspectors, give numerous instances of bad Hospital construction, but the above will suffice to illustrate the need there is for improvement.

(14). Another matter in which almost without exception the Hospitals of the Colony are wanting, is that of proper Operating Rooms. In these days of delicate Surgical operations, which depend for their success on the proper carrying out of a number of minute details for which proper accommodation and appliances are necessary, it is difficult to understand how the surgical work of the larger Hospitals can be properly carried out. At the Somerset Hospital, which is better off than many other Hospitals in this respect, there is only one small, badly-lighted room in which all the operations of the Institution have to be carried out, no accommodation being available in which the patient can be anæsthetised and prepared for operation, or in which he can be looked after while recovering from the effects of the anæsthetic.

Open-air Facilities for Patients.

(15). Another question deserving of consideration is the provision of improved and increased facilities for the open-air treatment of patients and convalescents. In quite the majority of our Hospitals no adequate verandah or other covered outdoor accommodation for patients is provided; still less are there any Open-air Wards. In but a few cases are the surrounding grounds laid out as a place in which patients can obtain the benefits of air and sunlight, factors as important in the treatment of many diseases as diet and medication. It is painful to see at the Somerset Hospital the efforts made by the Medical Officers and the shifts adopted to give patients these benefits with the meagre appliances available.

(16). Again, few hospitals have any suitable and proper isolation accommodation in which to treat infectious diseases brought into the Hospital by inadvertence, or cases in regard to which the diagnosis is doubtful and there is a suspicion of the disease being of an infectious nature. Every Hospital should be provided with such accommodation no matter how limited in extent.

Absence of Disinfecting and Laundry Appliances.

(17). Another matter of importance which is neglected in nearly every Hospital, is the absence of any provision for the carrying out of proper disinfection of bedding and the like. Suitable appliances for this purpose should be available in every Hospital, and mattresses and other infected and unwashable articles should be periodically treated by them.

(18). Also, almost without exception, the Hospitals of the Colony are unprovided with proper Laundry Appliances. This is one of the first requisites of a properly equipped Hospital of any size. I am pleased to be able to note that proper Laundry machinery is being set up in connection with the Somerset Hospital.

Nurses' Accommodation.

(19). Finally, in the case of many Hospitals, the accommodation for Nurses is either unsuitable or inadequate, both as regards the provision of Nurses' Duty Rooms connected with the different Wards, and as regards proper Sleeping and Living accommodation for the Nurses themselves. Whenever possible, the Nurses should reside apart from the Hospital itself, so that when off duty they are entirely removed from the atmosphere and the influence of the sick. In the case of the Somerset Hospital it is satisfactory to note that the provision of proper accommodation for the Nursing Staff is shortly to be undertaken.

It is clear that such radical alterations as are necessary in order that Hospital buildings shall be placed upon a sound footing can only be carried out by degrees. It is, therefore, eminently necessary that, before undertaking alterations and additions, Hospital Boards of Management should first decide upon a general scheme upon which all future extensions are to be carried out, and that they should not proceed, as is so frequently the case, in a hand-to-mouth manner, making fragmentary additions which can form no part of a final, well-thought-out scheme, and, indeed, will in many cases have to be demolished later on. It is mainly for this reason that I have above recommended that extensions of buildings and structural alterations should not be undertaken except with the sanction of the Minister.

The Admission of Patients.

(20). From the figures I have already given it will be recognised that the Public generally are not so ready to contribute towards Hospital maintenance as should be the case; the feeling apparently being that this, like most other public matters in the Colony, may be left to the Government to provide for out of Public Funds. This attitude is regrettable. Hospitals are not likely to be put upon the splendid footing they are in England until the Public generally takes a greater interest in their welfare and control. To this end I think it would be well if local interest were stimulated by giving to Subscribers some privileges in connection with the admission of patients. Every patient, not being an accident or other urgent case or a Government patient, before being admitted, should be required to present a "letter of recommendation" signed by a Subscriber to the funds of the Hospital, the number of such letters which Subscribers would be entitled to issue being fixed by the extent of their Annual Subscription. In many Hospitals in the Colony, the system under which patients are admitted is very lax; indeed, in a number of cases they are admitted at the discretion of the Matron, no one appearing to take any definite interest in the matter. If, therefore, it were to be

recognised that Subscribers are the persons chiefly entitled to recommend the admission of cases and that this function depended upon the amount of their subscription, possibly the charitably disposed might be stimulated in the giving of contributions towards Hospital maintenance.

(21). With regard to the admission of Government patients, this matter requires to be put on a more defined basis. Pauper patients suffering from diseases suitable for treatment in a General Hospital should be admitted on the recommendation of the Resident Magistrate of the District, provided beds be available. At the present time, a number of Hospitals are required to take chronic sick paupers for treatment, when sent in by the Government, either free of charge or at a fixed rate payable by the Government. I am of opinion that this is an unsatisfactory arrangement. Chronic Sick patients are not suitable cases for a General Hospital and in no case in which the arrangement is in force is it, in my opinion, satisfactory. The treatment of Pauper Chronic Sick requires to be put on a better basis over the Colony generally, and I shall deal with this matter later on. In several of the General Hospitals patients suffering from Venereal disease are treated for the Government and at its expense under the provisions of the Contagious Diseases Prevention Act, Part I. Such cases are not suitable for General Hospitals and they are a source of trouble to the Management, and for this reason there is a danger that they may be neglected.

In some of the General Hospitals, Maternity cases are admitted. This is an undesirable practice and should be discontinued.

The Visiting Medical Staff.

(22). In a number of Hospitals the practice of paying annually fees or honoraria to the Visiting Staff is still in operation. This is a procedure which, I think, in many cases might well be discontinued. In the case of the Provincial Hospital, Port Elizabeth, and the Frere Hospital, East London, the Visiting Medical Officers have voluntarily surrendered their annual honoraria. The appointment of a Visiting Medical Officer to a General Hospital is in itself a distinction which should be coveted irrespective of any question of remuneration; moreover, in several important respects it is of value to the holder. I would suggest that the Hospital Boards of, at any rate the larger Institutions, at present paying such fees should approach the Members of the Staff with a view to ascertaining whether they would not be prepared to relinquish them.

A number of Hospitals suffer in the efficiency of their administration owing to their employing no Resident Medical Officer. I think that, in Hospitals of any considerable size, whenever funds admit of such an appointment being made, a Resident Medical Officer should be secured.

The Nursing Staff.

(23). Much improvement has of late years been made in the Nursing Staffs of most Hospitals, but there remains room for further improvement in this respect in several Institutions. Thus, in the Midland Hospital, Graaff-Reinet, the Nursing arrangements are extraordinarily old-fashioned, and it is hard to understand how they could have continued for so long. In the Grey Hospital, King William's Town, there is also room for improvement.

The Training of Nurses.

An advance has also been made in many Hospitals in the matter of the teaching and training of Nurses, so that in several Institutions a course of training is provided which compares very favourably with that

of similar Institutions in England. Nevertheless, there still remains ample opportunity for general improvement in this respect in Colonial Hospitals. Much good is being effected in this direction by the Nursing Examinations held by the Colonial Medical Council in connection with the granting of its Certificate of Nursing Efficiency, and a steady increase, both in the number of Nurses presenting themselves for Examination and in the quality of their work, is taking place. Every Hospital Board should arrange for the giving of proper instruction to its Nurses, both by the Medical Staff and the Matron.

Waste of Clinical Material.

(24). One of the greatest deficiencies of Hospital Management in this Colony, from the Medical and Scientific point of view, is the entire waste of Clinical Material taking place. In few Hospitals are proper Clinical Records kept or pathological or *post-mortem* examinations made, and it, therefore, results that year by year thousands of cases furnishing valuable clinical information pass through our Hospitals unrecorded. It is, indeed, almost the rule to find in a Hospital an entire absence of all Medical Records of patients, beyond the temperature charts and the mere statement of the names of the diseases for which they were admitted.

This matter has made itself particularly evident in connection with certain Despatches received from the Right Honourable the Secretary of State for the Colonies asking the Colonial Government to assist in the collection of statistics and pathological data for use in connection with the National Cancer Research now being carried on in Great Britain. It is humiliating to confess that, practically, the Colony can furnish no such data.

The foregoing remarks are concerned with Hospital Management in general. I have not thought it necessary to deal in detail with particular Hospitals, as these are treated of more fully and better in the special Reports of the Medical Inspectors. There are, however, one or two matters relating to individual Institutions that I should mention.

Provincial Hospital, Port Elizabeth.

This Hospital is much in need of re-construction and requires a very considerable sum to be spent upon it in order to render it fit to cope with the volume of work devolving upon it. Many of the buildings are structurally unsuited for the purposes of a Hospital. The amount required for re-construction is likely to be considerable and much greater than will be immediately forthcoming, but it is to be hoped that the Authorities, before undertaking any additions, will decide on a general scheme of re-construction which can be carried out piecemeal, so that all additions will eventually form a portion of that scheme. This procedure has not been acted upon in the past, with the result that good buildings already erected will, if a suitable scheme is to be carried out, have to be demolished.

In connection with a scheme of re-construction, it has been suggested that an entirely new site for the Hospital should be found, and negotiations have been entered into for the adoption of a site at Humewood. In my opinion, putting aside the circumstances that the larger part of the buildings are too good to be abandoned, the site at Humewood would be unsuitable as it is too far from the centres of labour. This difficulty of an out-of-the-way site is now experienced in the case of the Somerset Hospital, the position of which, however, has much to recommend it owing to its close proximity to the Docks.

*The Somerset Hospital and Cape Town Free Dispensary:
Suggested Amalgamation.*

In connection with the Somerset Hospital and Cape Town Free Dispensary, I am of opinion that much improvement would result from some form of amalgamation of these two Institutions.

The Somerset Hospital is almost devoid of Out-patient accommodation, and such accommodation as it possesses is too far off to be of extensive service to the population. On the other hand, the Free Dispensary is simply an Institution for out-patient treatment, without any means of dealing with serious cases presenting themselves. Thus the work of each Institution is in itself incomplete.

At the present time the Somerset Hospital Authorities, alive to the deficiencies in regard to their Out-patient Department, are considering the possibilities of improving the accommodation as soon as room shall be made available by the removal of the Nurses' Residence from the Hospital buildings. At the same time, the Free Dispensary is entering upon a large scheme for the provision of more suitable quarters for the better carrying on of its work than those now occupied at the corner of Dorp and Keerom Streets. Under this scheme it is proposed to expend some £12,000 or £14,000 in the purchase of a new site and the erection thereon of a suitable building. The time, therefore, appears to be eminently fitted for considering the whole question of the future relationship of these two Institutions before anything final is done.

There is no doubt that the work of the Somerset Hospital is greatly hampered for the want of a proper Out-patient Department, not only for the treatment of ordinary out-patients, but as a place where convalescents discharged from indoor care can have their Medical treatment continued as out-patients, and there is equally no doubt that the work of the Free Dispensary cannot possibly be efficiently carried out unless accommodation is available to which it can send the more serious cases presenting themselves for treatment. Nevertheless, I believe I am right in saying that the only bond of co-operation between these two Institutions is that afforded by the fact that several gentlemen are Members of the Boards of both Institutions, and that the Medical Officer of the Free Dispensary is also a member of the Visiting Staff of the Somerset Hospital. Indeed, even with this bond I believe friction between the two Institutions is not unknown; nor could it well be otherwise, for it is an essential to the proper working of an Out-patient and an In-patient Department that the two should be in the closest possible union, so that the Medical Officer treating Out-patients is fully aware from day to day of the number of vacant beds; the kind of cases that they can accommodate and the future probabilities of vacancies for particular cases at the time under treatment; while, on the other hand, in the case of the Hospital, satisfactory provision must be made for the continued treatment of patients after their discharge from in-door treatment in the Hospital.

For this reason alone I would strongly urge that some form of amalgamation be arranged between these two Institutions, but there are other important grounds why this should be done. As I have observed, the Somerset Hospital is too far distant to expect out-patients to travel to it, and conveyance to it must, in many cases, entail upon them no inconsiderable expense. The Out-patient Department should be in a thoroughly central and accessible place in Cape Town, preferably in the direction of Woodstock.

But it is not only to the advantage of the patient, by consulting his personal convenience, that the Out-patient Department should be centrally situated. It will also be to his still greater advantage by resulting in the formation of a much better Medical Institution, by enabling Mem-

bers of the Medical Profession who devote themselves to special branches of work, to attend at regular times for dealing with special diseases not usually requiring indoor Hospital treatment. At the present moment, Cape Town is far behind European cities of a similar size in being practically devoid of proper Out-patient Cliniques for the treatment of special complaints, such as, diseases of the Eye, the Ear, the Nose and Throat, diseases of the Skin and Gynæcology.

The only argument which I have heard advanced against this scheme, is the objection which is likely to be raised by some of the Subscribers, especially those to the Free Dispensary, who for years past have generously supported the Institution as a child of their own rearing. I fully recognise that sentiment should not be ignored in such matters, but, at the same time, where a valuable and much needed reform is necessary, such considerations should not be carried too far. It would be a pity to lose the support of any of these generous Subscribers, and, personally, I think they are far too public-spirited for this to happen, but in any case it would seem that the value of additional subscriptions is nullified if their acceptance is to result in increased expenditure and a loss of efficiency. As the Government is contributing to both these Institutions it would certainly appear that the matter deserves its careful consideration, the expenditure of public money being involved.

In connection with the consideration of this subject, it should not be forgotten that, sooner or later, a scheme of Medical Teaching will be undertaken in this Colony, and such an Institution as the present opportunity affords would be of inestimable benefit in connection therewith.

Chronic Sick Hospitals.

At the present time there only exist two Chronic Sick Hospitals in the Colony, both of which are entirely supported by Government Funds, the Grahamstown Chronic Sick Hospital and the Old Somerset Hospital. The accommodation provided in both of these Institutions is practically the same now as it was many years ago, although the needs of the Colony in this respect have greatly increased during the interval. At the present time, it is a matter of very serious consideration to know what to do with many Chronic Sick Paupers scattered through the Colony, and as a result it is often necessary to maintain them separately in outlying Districts at considerable expense.

A proposal is on foot to improve and enlarge the accommodation at the Grahamstown Institution. I think, however, any such step would be most undesirable. The buildings comprising this Hospital are entirely unsuited for the purpose to which they are put, being as they are nothing more than old Military Stables which have been altered for the purpose. These buildings are unsatisfactory both in the matter of construction and arrangement. Moreover, the site on which they stand is unsuited for a Hospital; it presents almost insurmountable difficulties in regard to proper drainage. As a Hospital its satisfactory administration presents defects which, although they can be remedied, can only be so by the increase of expenditure. Furthermore, it is only of easy access to a limited portion of the Colony.

With regard to the Old Somerset Hospital I need make no comments; I need say nothing as to the very unsuitable accommodation which it provides: this is a matter already too well known both to the Government and the Public. A considerable annual expenditure is entailed in its up-keep, which only serves to render it habitable without effecting any improvement.

The matter which I would urge for favourable consideration is, that the removal of the Old Somerset Hospital from its present site be as soon as possible undertaken. This question has been before the Government for many years past. At the time that Plague broke out in Cape Town a large area of ground, known as Van Rhyn's Farm, at Maitland, was purchased for the temporary accommodation of persons evicted from their homes in connection with Plague operations. In authorising the purchase of this ground the then Colonial Secretary was strongly influenced by the fact that when it was no longer required for Plague purposes it would constitute an excellent site for the establishment of a Chronic Sick Hospital. It is long since the site was no longer required for Plague purposes.

The ground in question consists of some fifty acres of land and cost £17,500; it has a fairly elevated position, overlooking the Black River and the Royal Observatory, and would, all things considered, provide an exceptionally suitable place for the erection of a Chronic Sick Institution. It could, moreover, be easily connected with the Railway by means of a Siding, so that Chronic Sick patients from all parts of the Colony could be easily transported to the very doors of the Institution.

On the other hand, there is no doubt but that the present site and buildings forming the Old Somerset Hospital could be most advantageously disposed of for a sum which should entirely defray the cost of the erection of a new Institution on the most modern and approved lines.

I would recommend that any new Institution should provide sufficient accommodation for all Chronic Sick in the Colony, and that the Grahamstown Institution be abolished. If a sick person can travel to Grahamstown he can equally, or with greater ease, travel to Cape Town, and there is therefore no *raison d'être* for a Hospital at the former place.

The Grey Hospital, King William's Town.

The Grey Hospital at King William's Town is managed and maintained entirely by the Government. It was originally established for the treatment of Natives, in order, by demonstrating to them the advantages of civilised methods of Medical Treatment, to break down the practice of Witchcraft in the Native Districts. In my opinion the time has arrived when the Management of this Hospital should be put on a popular basis, similar to that of the other General Hospitals of the Colony. There are a number of reasons for holding this view. In the first place, I think that under Public Management the Hospital would be improved and its usefulness, especially among Europeans, greatly increased. The present Management is obsolete and has a number of faults which I need not here particularise. In the next place, it is difficult to see why the Town and District of King William's Town should be relieved from financial and other responsibility in connection with their general Hospital, a responsibility which is accepted in the case of other centres; nor, indeed, do I think that the inhabitants of King William's Town desire any such relief. It is probable, however, that the Government will have to give, at any rate for the first few years, a larger measure of financial support than is accorded to other Hospitals.

The Hospital buildings, although imposing and very substantially built, require much repair, and in many respects do not accord with modern ideas of Hospital Construction. It is, therefore, necessary that some expenditure be incurred for the carrying out of repairs, improvements and some small additional accommodation.

Attached to this Hospital are very extensive grounds, a large portion of which I think might well be transferred to the Municipality of King William's Town, on the condition that the Council undertakes to

lay them out and maintain them as a Public Park. I feel sure that this condition would be agreed to and that a very great boon would thereby be conferred upon the community.

18.—CONCLUDING REMARKS.

In concluding this Report, I desire to express my thanks to Dr. J. A. Mitchell, the Assistant Medical Officer of Health for the Colony, to Dr. D. C. Rees, Medical Inspector, who is in charge of Plague operations at Port Elizabeth, and to those other Medical and other Officers who from time to time have been temporarily engaged with this Department in connection with Plague and other work.

Dr. Mitchell, like myself, has been carrying on his duties under a severe pressure of work, and the Public Service owes very much to his capacity and his unflagging energy.

I have the honour to be,

Sir,

Your Obedient Servant,

A. JOHN GREGORY,

Medical Officer of Health for the Colony.

ANNEXURES.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "A."

TABLE 2.

Showing the number of cases of Small-pox occurring in the different districts of the Native Territories during the years 1897, 1898, 1899, 1900, 1901, and 1902.

DISTRICT.	1897.						1898.						1899.						1900.						1901.						1902.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Meunt Currie	10	...	5	2	...	3	4	...	1	...	2	1

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "A."

TABLE 3.

Return of Outbreaks and Cases of Small Pox occurring in the Colony Proper during the year ended 31st December, 1903.

DISTRICT.	Number of Outbreaks.	CASES DISCOVERED.								TOTAL.	DEATHS.								TOTAL.	
		Unvaccinated.				Pre-vaccinated.					Unvaccinated.				Pre-vaccinated.					
		Europ.		Col.		Europ.		Col.			Europ.		Col.		Europ.		Col.			
		M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	M.	F.	M.	F.	M.	F.		
Aberdeen	4	1	...	1	4	...	...	...	...	6	...	...	...	...	...	...	...	...	...
Albany	6	...	...	2	...	...	...	3	1	6	...	...	2	...	...	...	...	...	...
Albert	5	...	...	1	2	...	...	9	...	15	...	...	1	1	...	...	...	...	2
Venterstad	2	...	...	...	2	...	...	1	...	3	...	...	...	...	...	...	...	...	...
Alexandria	2	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	...
Aliwal North	3	...	...	23	26	...	...	4	3	56	...	...	2	2	...	...	...	...	4
Lady Grey	2	...	...	...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	...
Barkly East	5	...	...	4	1	...	...	1	...	6	...	...	...	...	...	...	...	...	...
Bathurst	10	...	...	5	5	...	...	10	7	27	...	...	1	...	...	...	...	...	1
Bedford	2	...	...	3	1	...	...	...	...	4	...	...	...	...	...	...	...	...	...
De Aar (Britstown)...	...	2	...	...	1	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...
Cape	12	3	2	33	18	9	...	9	8	82	...	...	...	...	...	...	...	...	...
Durbanville	3	...	...	2	1	1	...	1	...	5	...	...	...	...	...	...	...	...	...
Carnarvon	3	1	1	1	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Cathcart	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Colesberg	2	...	...	...	6	...	...	10	...	16	...	...	...	...	...	...	...	...	...
East London	1	...	...	...	...	...	...	2	1	3	...	...	...	...	...	...	...	...	...
Fort Beaufort	6	2	...	44	47	...	1	3	8	105	...	...	1	3	...	1	...	...	5
Glen Grey	22	...	...	43	50	...	...	23	31	147	...	...	3	5	...	...	...	...	8
Graaff-Reinet	2	...	...	...	1	1	2	7	5	16	...	...	...	...	1	...	...	...	1
Hanover	1	...	...	...	1	...	...	6	4	11	...	...	...	...	...	...	...	1	1
Herschel	23	...	...	26	35	...	...	...	...	61	...	...	...	...	...	...	...	...	...
Humansdorp	5	...	...	7	4	...	...	1	1	13	...	...	1	1	...	...	...	...	2
Jansenville...	...	17	1	3	37	31	5	4	10	12	103	...	...	3	...	...	...	...	...	3
Kimberley	2	2	1	1	1	...	...	...	...	5	...	...	...	...	...	...	...	...	...
King William's Town	...	8	...	...	10	11	...	...	...	...	21	...	...	...	...	...	...	...	...	...
Middelrift	1	...	...	3	4	...	...	...	...	7	...	...	...	...	...	...	...	...	...
Malmesbury	21	1	3	26	30	...	...	8	5	73	...	...	...	...	...	...	...	...	...
Hopefield	9	1	2	8	11	2	...	8	9	41	...	...	...	...	...	...	...	...	...
Middleburg...	...	14	2	2	31	33	5	1	32	27	133	...	...	4	4	...	...	1	1	10
Molteno	5	...	...	2	1	1	...	10	6	20	...	...	...	...	...	...	...	...	...
Murraysburg	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Namaqualand	4	1	1	31	23	4	...	2	2	64	...	...	...	...	...	...	...	...	...
Oudtshoorn	2	...	...	3	...	...	...	2	...	5	...	...	...	...	...	...	...	...	...
Paarl	5	1	1	9	5	...	...	...	...	16	...	...	...	...	...	...	...	...	...
Wellington	2	...	...	3	2	...	...	4	2	11	...	...	...	...	...	...	...	...	...
Peddie	45	3	3	56	37	1	2	3	2	107	...	...	5	...	...	...	...	...	5
Piquetberg	1	...	1	5	6	...	...	...	...	12	...	...	...	...	...	...	...	...	...
Port Elizabeth	1	17	16	65	40	...	...	...	...	138	1	...	6	1	...	...	...	...	8
New Brighton	1	...	...	...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Port Nolloth	1	...	...	27	...	...	...	...	...	27	...	...	...	...	...	...	...	...	...
Prieska	1	...	...	...	1	...	...	...	1	2	...	...	...	...	...	...	...	...	...
Queenstown	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
Sterkstroom	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
Richmond	1	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Simonstown	4	...	...	2	...	2	...	...	...	4	...	...	...	...	...	...	...	...	...
Stellenbosch	7	2	...	2	3	...	...	1	...	8	...	...	...	...	...	...	...	...	...
Steytlerville	3	...	...	2	1	...	...	3	4	10	...	...	...	...	...	...	...	...	...
Stockenstrom	5	...	...	22	...	...	...	...	...	22	...	...	1	...	...	...	...	...	1
Stutterheim	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Tulbagh	2	...	...	3	8	...	...	...	...	11	...	...	...	...	...	...	...	...	...
Uitenhage	1	5	...	49	44	4	2	30	27	161	...	...	5	3	...	...	2	1	11
Victoria East	13	...	...	4	5	...	...	16	11	36	...	1	...	...	...	...	1	2	4
Victoria West	3	...	...	16	13	...	...	2	2	33	...	...	1	...	...	...	...	...	1
Willowmore	9	8	7	11	9	...	2	...	...	37	...	...	1	...	...	...	...	...	1
Worcester	13	5	...	96	...	...	...	...	...	101	...	...	...	...	...	...	...	...	...
Wynberg	1	1	2	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Mowbray	2	...	...	1	2	1	...	...	...	4	...	...	...	...	...	...	...	...	...
		332	57	45	728	528	36	14	227	180	1,815	1	1	37	20	1	1	4	5	70

Summary.

	Cases.	Deaths.	Mortality %.
Unvaccinated ...	1,358	59	4.35 %
Pre-vaccinated ...	457	11	2.41 %
Total ...	1,815	70	3.86 %

Number of separate outbreaks ... 332
Number of infected Districts and Sub-districts ... 57

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "A."

TABLE 4.

Return of Outbreaks and Cases of Small-Pox occurring in the Native Territories during the Year ended 31st December, 1903.

DISTRICT.	Number of Outbreaks.	CASES DISCOVERED.								TOTAL.	DEATHS.								TOTAL.	
		Unvaccinated.				Pre-vaccinated.					Unvaccinated.				Pre-vaccinated.					
		Europ.		Col.		Europ.		Col.			Europ.		Col.		Europ.		Col.			
		M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	M.	F.	M.	F.	M.	F.		
		M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	M.	F.	M.	F.	M.	F.		
A.—GRIQUALAND EAST																				
Mount Currie	...	22	...	...	14	7	12	6	33	35	107	...	...	3	...	...	...	...	1	4
Maclear	...	1	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Matatiele	...	5	...	...	24	35	...	...	...	...	59	...	...	...	1	...	...	...	...	1
Mount Fletcher	...	2	...	...	2	2	...	...	...	...	4	...	...	...	...	...	...	...	...	...
Mount Frere	...	10	...	...	14	25	...	...	...	...	39	...	...	...	2	...	...	...	...	2
Tsolo	...	15	...	...	24	26	...	...	7	3	60	...	...	...	...	...	...	1	...	1
Umzimkulu	...	4	...	...	5	2	...	...	3	1	11	...	...	...	...	...	...	...	...	...
B.—TEMBULAND.																				
Engcobo	...	1	...	...	2	...	...	...	1	...	3	...	...	...	...	...	...	...	...	...
Port St. John's	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
St. Marks	...	1	...	...	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
C.—TRANSKEI.																				
Nqamakwe...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Willowvale...	...	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
		64	...	...	92	97	12	6	45	39	291	...	...	3	3	...	...	1	1	8

Summary.

	Cases.	Deaths.	Mortality %
Unvaccinated	189	6	3·17 %
Pre-vaccinated	102	2	1·96 %
Total	291	8	2·75 %

Number of Separate Outbreaks ... 64
Number of Infected Districts ... 12

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "A."

TABLE 5.

Colony Proper : Vaccinations performed during each year from 1894 to 1903 inclusive.

DISTRICT.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	Total, 1894-1903	Mean Pop. 1891-1904
Aberdeen ...	773	46	649	51	987	279	69	23	3,502	117	6,496	7,462
Albany... ..	1,419	31	2,661	23	3,998	611	886	35	5,129	951	15,744	26,496
Albert	1,924	459	23	...	1,483	179	273	1	784	303	5,429	12,178
Alexandria ...	2,089	1,240	20	103	3,589	...	178	11	441	977	8,648	10,407
Aliwal North...	1,525	2,492	1,104	72	3,879	*	117	12	3,847	1,438	14,486	12,471
Barkly East ...	1,164	3,407	494	363	726	18	1,183	...	551	523	8,429	8,352
Barkly West ...	150	3,856	56	642	2,918	*	61	...	2,444	2,419	12,546	22,063
Bathurst	3,001	4,299	...	...	2,641	685	719	17	1,110	2,630	15,102	9,973
Beaufort West ...	923	102	203	33	39	47	...	...	4,469	312	6,128	9,961
Bedford	2,671	55	...	...	3,533	...	183	...	1,209	70	7,721	12,471
Bredasdorp	77	16	32	37	485	276	88	...	1,031	178	2,220	7,137
Britstown	99	212	96	212	957	754	...	120	5,152	87	7,689	6,874
Caledon	1,095	329	783	...	1,411	785	1,386	1,169	1,630	1,198	9,786	13,621
Calvinia	896	196	93	47	131	141	9	...	6	24	1,543	10,867
Cape	2,614	606	1,896	2,260	6,350	2,015	1,861	978	9,430	1,347	29,357	154,799
Carnarvon	386	59	1,284	20	372	294	309	205	396	596	3,921	5,921
Cathcart	1,881	1,003	249	...	1,623	800	...	...	952	952	7,460	9,170
Ceres ... ..	...	5	811	...	589	263	...	...	312	133	2,113	6,416
Glanwilliam ...	340	325	59	70	393	522	552	...	943	31	3,235	9,211
Collesberg	618	76	...	109	814	...	845	...	2,772	527	5,761	9,859
Cradock	2,660	175	630	...	1,020	124	1,399	39	5,533	130	11,710	16,904
East London ...	16,395	650	280	...	1,693	4,112	3,639	4	13,669	1,460	41,908	35,396
Fort Beaufort ...	5,570	79	108	...	1,859	502	346	1,686	1,553	1,915	13,618	17,277
Fraserburg	37	196	262	198	351	632	35	67	79	54	1,911	6,615
George	164	303	164	994	148	697	233	512	1,007	561	4,783	11,375
Glen Grey	15,360	7,862	2,521	1,190	4,355	4,198	20,258	2,964	3,349	1,677	63,734	47,337
Gordonia ... ..	...	...	1,122	...	1,383	294	...	...	52	236	3,087	†8,784
Graaff-Reinet ...	869	2,472	6,916	527	5,349	1,075	247	...	8,966	...	26,421	18,282
Hanover	602	118	...	45	455	57	36	11	2,084	175	3,583	4,012
Hay	18	805	488	64	833	*	...	...	...	...	2,208	9,425
Herbert	324	248	193	226	...	*	...	41	811	33	1,876	10,303
Herschel	8,251	3,207	13,414	...	13,660	*	2,399	...	...	...	40,931	30,979
Hope Town	408	181	15	21	186	47	107	...	963	175	2,103	5,776
Humansdorp ...	747	393	51	291	1,727	1,044	310	186	674	1,437	6,860	12,854
Jansenville	564	266	631	71	39	...	64	5	1,212	1,057	3,909	10,307
Kenhardt ... ..	...	1,092	349	167	455	*	22	46	255	77	2,463	6,173
Kimberley	1,683	4,202	3,131	1,879	868	1,692	476	329	6,488	6,347	27,095	53,996
King William's Town	79,968	109	165	117	16,894	6,818	2,466	6,821	14,646	1,434	129,438	92,408
Knysna	397	37	134	29	1,177	84	166	9	902	46	2,981	8,132
Komgha	581	209	720	...	610	172	28	365	27	...	2,712	10,824
Kuruman ... ..	...	...	37	...	2,051	*	...	...	2,276	11	4,375	†12,909
Ladismith	482	...	307	78	1,037	567	297	51	1,523	215	4,557	7,686
Mafeking ... ..	...	200	...	...	6,931	*	...	...	2,664	2,591	12,386	†21,436
Malmesbury ...	814	76	104	35	2,421	1,208	224	...	2,514	3,460	10,856	26,416
Middelburg ...	863	...	66	...	232	...	...	...	2,233	386	3,780	14,911
Molteno	1,413	...	110	...	1,749	134	1,397	...	1,782	216	6,801	7,466
Montagu ... ..	...	...	...	854	549	195	162	204	886	260	3,110	Included in Robertson.
Mossel Bay	681	53	107	104	1,036	446	249	84	450	12	3,222	8,992
Murraysburg... ..	1,004	...	105	...	992	97	...	...	607	344	3,149	4,041
Namaqualand ...	368	745	125	...	375	1,618	1,127	...	320	3,826	8,504	18,017
Oudtshoorn	406	25	506	134	5,424	360	1,271	341	2,339	1,578	12,384	27,098
Paarl	88	250	193	276	5,551	859	828	174	3,307	1,494	13,020	25,918
Peddie	2,615	226	312	2	4,828	...	357	1,285	2,149	7,280	19,054	18,114
Philip's Town ...	73	37	68	114	443	83	...	...	1,226	7	2,051	5,803
Piquetberg	79	6	...	1,569	55	1,658	415	...	1,683	787	6,252	13,011
Port Elizabeth ...	3,783	402	170	133	18,740	37	268	250	603	594	24,980	36,017
Port Nolloth ...	292	103	54	42	95	202	210	34	283	756	2,071	Included in Namaqualand
Prieska	252	520	7	100	296	*	...	19	1,030	95	2,319	5,035
Prince Albert ...	1,483	562	126	400	264	569	470	162	2,157	459	6,652	8,178
Queen's Town ...	2,028	302	442	137	2,489	1,435	507	68	4,346	61	11,815	28,437
Richmond	570	118	448	...	328	265	...	...	257	...	1,986	4,990
Riversdale	12	1,176	81	19	339	823	21	4	2,287	71	4,833	12,537
Robertson	281	11	404	816	652	527	446	...	357	244	3,738	13,046
Simon's Town ...	59	...	...	413	647	120	182	133	116	114	1,784	Inc. in Cape.
Somerset East ...	2,962	330	1,053	245	2,462	73	146	...	8,194	...	15,465	20,524
Stellenbosch ...	109	78	225	...	1,496	535	53	198	5,018	918	8,630	17,525
Steynsburg	152	12	994	3	251	18	74	...	...	...	1,504	6,600
Steytlerville ...	...	...	...	...	...	325	236	31	580	2,764	3,936	Included in Willowmore.
Stockenstrom ...	1,698	43	133	...	1,710	923	457	67	...	2,234	7,265	8,858
Stutterheim	4,778	1,755	1,123	43	2,743	1,966	1,446	1,219	2,655	648	18,376	10,238
Sutherland ... ..	...	...	...	29	709	99	92	...	123	33	1,085	4,232
Swellendam	1,137	129	...	...	717	990	55	376	...	377	3,781	12,566
Tarka	938	100	42	18	266	159	2,096	286	109	398	4,412	8,381
Taungs... ..	...	11,841	...	...	6,642	*	243	5	...	3,171	21,902	†23,108
Tulbagh	289	37	44	59	623	71	342	52	274	205	1,996	6,543
Uitenhage	6,443	905	925	100	3,662	700	317	47	1,510	4,910	19,519	26,424
Uniondale	275	877	11	3	684	381	...	...	...	740	2,971	8,921
Van Rhynsdorp ...	361	30	...	119	579	435	164	10	212	3	1,913	4,677
Victoria East... ..	6,953	1,561	...	6	1,951	1,480	...	1,219	2,302	776	16,248	16,064
Victoria West ...	380	25	138	126	353	434	401	...	981	61	2,902	6,987
Vryburg ... ..	...	5,000	4,144	35	6,020	*	...	...	500	1,605	17,304	†17,973
Willowmore	2,365	31	351	92	478	250	606	...	1,833	1,612	7,618	10,545
Wodehouse	762	1,017	1,284	63	73	*	6,783	60	1,409	78	11,529	16,762
Worcester	1,167	249	347	18	1,626	1,142	315	...	456	4,256	9,576	15,742
Wynberg	717	106	188	82	227	203	200	124	574	158	2,579	Inc. in Cape.
Grand Total ...	207,375	70,356	56,587	16,128	180,776	50,604	63,407	22,159	172,505	81,438	921,335	1,345,599

* No returns received from these districts owing to their disturbed state on account of the War.
† Population according to Census of 1904. These districts had not been annexed in 1891.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "A."

TABLE 6.

Native Territories: Vaccinations performed during each year from 1894 to 1903, inclusive.

CENTRES.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	Total 1894-1903	Mean pop. 1891-1904
<i>Griqualand East—</i>												
Maclear ...	1,168	712	423	194	159	35	312	720	1,936	212	5,871	5,062
Matatiele ...	915	8,025	1,794	...	1,727	2,258	...	...	4,800	1,770	21,289	26,088
Mount Aliff ...	2,546	6,967	6,673	...	1,577	18	1,103	2,391	2,039	9	23,323	14,469
Mount Fletcher ...	2,510	4,434	10	...	...	...	...	280	13,344	789	21,367	19,068
Mount Frere ...	9,777	2,895	2,949	644	6,406	9	3,839	...	312	7,801	34,632	28,034
Qumbu ...	424	4,406	2,615	1,695	3,769	125	202	365	7,516	...	21,117	27,353
Tsolo ...	424	5,819	3,180	1,744	22,420	17,715	892	379	25,958	1,146	79,677	27,887
Umzimkulu ...	1,011	896	1,383	198	7,502	...	1,150	1,193	2,116	825	16,274	29,728
Kokstad ...	504	1,090	1,474	739	1,069	111	51	...	1,368	2,524	8,930	9,852
<i>Tembuland—</i>												
Elliot ...	...	120	208	203	1,703	66	204	376	755	602	4,237	7,849
Elliotdale ...	...	...	2,820	108	18,633	1,966	2,117	...	20,525	...	46,169	25,650
Engcobo ...	5,214	12,835	4,352	148	7,632	5,234	13,431	2,951	5,052	74	56,923	57,664
Mqanduli ...	5,306	6,127	...	11	23,065	8,825	7,117	...	6,117	...	56,568	32,173
Port St. John's ...	41	102	353	376	27	2,725	119	...	7,673	...	11,416	8,915
St. Mark's ...	10,220	...	350	...	...	...	12,000	...	5,634	...	28,204	29,857
Umtata ...	599	10,954	726	300	14,763	7,231	32,488	...	10,676	...	77,737	39,214
Xalanga ...	2,471	4,188	563	67	1,701	939	2,131	288	1,200	80	13,628	13,228
<i>Transkei—</i>												
Butterworth ...	208	968	...	200	1,435	1,798	1,724	1,866	765	3,254	12,218	17,262
Kentani ...	1,319	4,830	1,126	381	17,999	727	1,751	20,033	375	...	48,541	31,631
Idutywa ...	250	...	...	...	11,568	2,531	5,590	...	...	88	20,027	26,649
Nqamakwe ...	741	16,461	379	112	21,828	5,584	1,241	9,436	2,833	7,701	66,316	32,314
Tsomo ...	3,001	...	193	180	6,225	40	5,033	5,436	4,154	4,223	28,485	18,325
Willowvale ...	100	123	660	262	8,350	1,339	766	6,838	5,782	38	24,258	39,405
<i>Pondoland—</i>												
Bizana ...	...	1,109	479	...	8,465	291	79	4,610	3,841	5,448	24,322	*33,146
Flagstaff ...	...	...	...	...	7,235	30	...	...	16,347	...	23,612	*25,962
Libode ...	...	5,329	1,910	1,848	21,697	...	17,088	...	16,485	...	64,357	*24,933
Ngqueleni ...	...	23,823	781	...	18,798	3,122	9,343	211	...	1,086	57,158	*37,991
Tabankulu ...	...	17,791	5,696	747	12,036	59	...	13,374	204	...	49,907	*29,468
Lusikisiki ...	...	300	6,129	1,241	14,806	3,690	...	...	25,273	...	51,445	*42,394
<i>Walfish Bay—</i>	45	...	...	...	...	...	...	385	...	...	430	892
Grand Total ...	48,794	140,304	47,226	11,398	262,595	66,468	119,771	71,132	193,086	37,664	998,438	762,463

* Population in 1904,

REPORT OF MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "B."

TABLE 1.

Showing for each District of the Colony Proper, excluding Bechuanaland, the total number of Lepers on the Register on the 31st December, 1891, the number discovered during the period from the 1st January, 1892, to the 31st December, 1903, and the manner in which they were disposed of.

District.	No. of Lepers on the Register on 31st Dec., 1891.	No. of Fr'shCas's discov'r'd 1892-1903.	Total Cases.	Removed.	Died	Disappeared or Absconded.	Disease Arrested.	On Register on 31st Dec., 1903.
Aberdeen ...	...	2	2	1	1	...	...	...
Albany ...	6	71	77	54	5	13	2	3
Albert ...	...	12	12	10	2	...	...	...
Alexandria ...	17	13	30	15	8	7	...	...
Aliwal North ...	...	19	19	15	...	4	...	...
Barkly East ...	...	10	10	6	1	3	...	...
Barkly West ...	9	37	46	17	8	21	...	...
Bathurst ...	...	8	8	5	1	...	...	2
Beaufort West ...	...	4	4	4	...	...	...	...
Bedford ...	9	21	30	18	3	9	...	...
Bredasdorp ...	...	2	2	1	1	...	...	...
Britstown ...	...	1	1	1	...	...	...	...
Caledon ...	1	64	65	53	5	5	...	2
Calvinia ...	...	7	7	2	...	4	...	1
Cape ...	35	202	237	190	17	17	8	5
Carnarvon ...	...	...	...	...	...	...	...	...
Cathcart ...	5	12	17	14	...	...	...	3
Ceres ...	2	11	13	12	...	1	...	...
Clonwilliam ...	3	9	12	9	...	3	...	...
Colesberg ...	...	11	11	9	...	2	...	...
Cradock ...	4	36	40	25	5	10	...	...
East London ...	10	23	33	28	5	...	...	...
Fort Beaufort ...	3	20	23	21	1	...	...	1
Fraserburg ...	...	1	1	...	...	...	...	1
George ...	4	20	24	13	1	4	...	6
Glen Grey ...	10	154	164	59	50	14	...	41
Graaff-Reinet ...	4	19	23	15	4	2	1	1
Hanover ...	...	5	5	3	...	2	...	...
Hay ...	1	20	21	12	4	4	1	...
Herbert ...	...	5	5	4	...	1	...	...
Herschel ...	...	149	149	42	39	30	...	38
Hope Town ...	3	2	5	2	1	2	...	...
Humansdorp ...	5	39	44	35	6	2	1	...
Jansenville ...	...	5	5	4	...	1	...	...
Kenhardt ...	...	4	4	4	...	...	...	...
Kimberley ...	7	91	98	61	7	29	...	1
King William's Town ...	41	218	259	156	31	...	...	72
Knysna ...	1	7	8	7	...	1	...	...
Komgha ...	...	14	14	6	3	2	1	2
Ladismith ...	...	...	...	...	...	...	...	...
Malmesbury ...	2	91	93	83	3	1	2	4
Middelburg ...	2	10	12	7	...	5	...	...
Molteno ...	...	7	7	3	1	3	...	...
Mossel Bay ...	6	4	10	8	2	...	...	...
Murraysburg ...	...	7	7	4	...	3	...	...
Namaqualand ...	2	4	6	4	2	...	...	...
Port Nolloth ...	...	...	...	...	...	...	...	...
Oudtshoorn ...	...	23	23	18	1	4	...	...
Paarl ...	14	80	94	72	7	10	4	1
Peddie ...	...	46	46	25	7	14	...	...
Philipstown ...	...	2	2	1	1	...	...	...
Piquetberg ...	2	48	50	33	3	13	...	1
Port Elizabeth ...	...	30	30	18	3	6	1	2
Prieska ...	...	1	1	1	...	...	...	...
Prince Albert ...	...	4	4	3	...	1	...	...
Queenstown ...	9	30	48	42	5	...	1	...
Richmond ...	...	2	2	2	...	...	...	...
Riversdale ...	2	19	21	17	1	3	...	...
Robertson and Montagu ...	2	12	14	10	2	2	...	...
Somerset East ...	12	18	30	24	3	3	...	...
Stellenbosch ...	19	41	60	44	5	8	2	1
Steynsburg ...	...	...	...	...	...	...	...	...
Stockenström ...	10	26	36	28	1	6	...	1
Stutterheim ...	...	8	8	5	1	2	...	...
Sutherland ...	...	...	...	...	...	...	...	...
Swellendam ...	...	3	3	2	...	1	...	...
Tarka ...	1	3	4	1	3	...	...	...
Tulbagh ...	...	12	12	12	...	...	...	...
Uitenhage ...	4	14	18	16	2	...	...	...
Uniondale ...	...	1	1	...	1	...	...	...
Van Rhynsdorp ...	...	5	5	4	...	1	...	...
Victoria East ...	13	31	44	26	4	12	2	...
Victoria West ...	...	3	3	1	...	2	...	...
Willowmore ...	...	9	9	4	1	4	...	...
Wodehouse ...	...	18	18	17	...	...	...	1
Worcester ...	1	32	33	26	2	4	...	1
	281	2,001	2,282	1,494	270	301	26	191

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."

Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE I.

Showing the results of the working of Part I. (Females) of "The Contagious Diseases Prevention Act, 1885," in each of the Districts in which the portion of the Act is in force, during the seven years ended 31st December, 1903.

	CAPE TOWN.							WYNBERG.				SIMON'S TOWN.					EAST LONDON.											
	1897	1898	1899	1900	1901	1902	1903	1897	1898	1899	1900	1901	1902	1903	1897	1898	1899	1900	1901	1902	1903							
Number of Women remaining on the Register on 31st December of previous year	247	247	280	174	249	229	188	21	28	24	31	40	44	26*	56	54	43	37	40	39	34	27	24	23	41	43		
Number of Women placed on the Register during the year.	215	250	174	234	279	246	50	14	3	11	9	5	1	20	7	6	5	5	4	7	11	6	8	31	17	9		
Number of Women removed from the Register during the Year.	215	217	280	159	299	287	189	7	7	4	...	1	19	29	9	17	11	2	5	12	8	9	8	13	15	10		
Relieved by order of the Resident Magistrate.	...	...	2	1	...	...	...	...	...	2	...	1	5	...	...	...	...	...	...	...	...	...	...	1	...	...
Died ...	12	8	11	11	7	10	6	1	...	1	...	...	1	2	1	...	3	2	1	...	3	...	2	4	2	1
Removed to some known address	69	193	211	28	28	29	15	6	7	...	...	...	11	5	...	...	...	...	...	...	...	...	...	...	...	10
Disappeared or absconded	127	13	56	119	261	247	168	...	...	1	...	...	2	22	6	16	6	...	4	10	3	...	6	...	14	...
Married	7	3	...	...	3	1	...	...	...	...	...	...	...	...	2	1	2	...	...	2	2	...	...	...	...	...
Number of Women examined during the year	462	497	454	408	528	475	238	35	31	35	40	45	45	30	63	60	48	42	44	46	45	33	32	54	58	41		
European	236	287	260	208	282	244	87	2	3	2	...	...	45	30	63	60	...	2	2	2	2	...	3	6	12	1
Coloured	226	210	194	200	246	231	151	33	28	33	40	45	45	30	63	60	48	40	42	44	43	33	32	48	46	40		
Voluntary Submissions under Section 14 of the Act.	462	497	454	408	528	475	238	35	31	32	38	45	45	30	56	50	48	38	39	40	38	33	32	54	58	41		
Compulsory Submissions under Section 10 of the Act.	...	...	...	...	...	...	...	...	...	3	2	...	...	...	7	10	...	4	5	6	7	...	...	...	...	...
Number of separate Periodical Examinations made.	3783	3156	3383	1513	2079	1826	995	346	403	312	353	368	572	192	1169	2067	1705	1841	1157	1230	1128	248	215	230	323	261		
Usual Length of interval between Examinations (in days).	14	14	14	14	14	14	14	14	14	14	14	14	14	14	20	10	10	43	16	13	18	28	28	30	30	7		
Number of Women found to be free from disease.	325	335	315	279	348	379	207	23	30	30	34	36	43	24	29	24	12	9	16	10	8	29	25	29	41	18	22	
Number of Women found to be diseased	137	162	139	129	180	96	31	12	1	5	6	9	2	6	34	36	36	33	28	36	37	4	7	3	17	36	19	
Number of Admissions into Hospital	279	221	172	200	192	145	36	13	1	7	8	9	2	6	34	36	36	33	28	36	37	4	7	3	17	60	25	
Nature of the Disease—																												
Syphilis: Primary	4	...	2	1	5	1	1	5	3	3	3	2	4	6	4	4	7	3	5	...	
Secondary	21	26	29	23	12	10	3	3	...	1	2	...	1	...	1	6	4	10	
Tertiary	18	37	24	48	70	31	6	...	1	1	3	3	1	6	3	5	4	10	
Gonorrhoea	100	79	65	89	70	85	20	9	...	4	1	4	21	22	10	18	19	2	50	9	
Other (Chancroid) Ulcer of Vulva Cervix, &c.	140	79	54	40	40	19	7	7	1	3	30	31	2	12	3	4	16	
Average duration of stay on each admission to Hospital (in days).	31.0	48.5	44.6	43.1	42.2	40.5	55	Cases treated in Cape Town Hospital.	Cases treated in Cape Town Lock Hospital.	55.0	42.0	43.0	49.0	56.0	46.0	48.0	Cases treated in King William's Town Lock Hospital.	
Number of Prosecutions under Section 11 of the Act.	4	4	4	
Number of Prosecutions under Section 17 of the Act.	20	47	44	24	23	44	8	7	10	19	17	11	8	1	3	7	10	2	11	...	4	4	2	7	4	...

TABLE 1—(Continued).

	KING WILLIAM'S TOWN.					PORT ELIZABETH.					UITENHAGE.					ALL DISTRICTS.					
	1897	1898	1899	1900	1901	1902	1903	1897	1898	1899	1900	1901	1902	1903	1897	1898	1899	1900	1901	1902	1903
Number of Women remaining on the Register on 31st December of previous year.	8	15	11	20	5	10	6	90	89	92	99	150	112	125	10	11	11	11	13	13	15
Number of Women placed on the Register during the year.	7	1	14	5	17	3	3	40	43	46	78	69	45	9	1	2	2	2	4	2	...
Number of Women removed from the Register during the year.	...	5	5	20	12	7	4	41	40	33	27	107	32	34	...	2	2	...	4	...	...
Believed by order of the Resident Magistrate.	...	...	...	...	...	...	2	4	1	1	2	...	...	...	...	1	2	...	...	...	...
Died ...	...	1	...	1	...	...	...	4	7	4	5	2	...	...	...	1	...	...	...	...	...
Removed to some known address	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Disappeared or absconded	...	2	4	19	12	6	2	33	32	28	20	105	32	34	...	...	...	...	4	...	...
Married	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Number of Women examined during the year	15	16	25	25	22	13	9	130	132	132	177	219	157	134	11	13	13	13	17	15	15
European	...	...	1	1	...	...	...	41	43	55	84	76	45	21	...	...	...	...	4	5	5
Coloured	15	16	24	24	22	13	9	89	89	77	93	143	112	113	11	13	13	13	13	10	10
Voluntary Submissions under Section 14 of the Act.	15	16	25	25	22	13	9	129	112	116	154	181	118	102	11	8	9	9	13	9	9
Compulsory Submissions under Section 10 of the Act.	...	...	...	...	...	...	...	1	20	16	23	38	39	32	...	5	4	4	4	6	6
Number of separate Periodical Examinations made.	28	80	131	77	83	53	39	1355	1316	1379	1751	2467	1940	1545	111	100	101	82	135	122	98
Usual Length of interval between Examinations (in days).	30	30	30	30	30	30	30	14	14	14	14	14	14	14	28	28	28	28	28	28	28
Number of Women found to be free from disease.	14	8	13	15	13	7	5	67	68	75	96	148	93	89	8	13	10	12	16	12	11
Number of Women found to be diseased	1	8	12	10	9	6	4	63	64	57	81	71	64	45	3	...	3	1	1	3	4
Number of Admissions into Hospital	1	11	15	12	12	6	4	63	64	57	81	71	64	45	3	...	3	1	1	3	4
Nature of the Disease—																					
Syphilis: Primary	...	2	4	1	...	3	1	46	23	11	17	38	18	13	2	...	1	...	...	2	1
Secondary	...	1	5	7	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tertiary	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gonorrhoea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other (Chancroid) Ulcer of Vulva	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cervix, &c.	...	8	6	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Average duration of stay on each admission to Hospital (in days).	28.0	41.1	26.5	43.8	33.0	26.5	36	45.0	40.0	33.0	36.0	27.0	32.0	36.5	29.6	...	33.0	60.0	27.0	32.0	36.5
Number of Prosecutions under Section 11 of the Act.	...	...	...	...	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Number of Prosecutions under Section 17 of the Act.	...	1	2	...	...	...	...	44	35	36	28	36	42	47	10	10	8	5	4	6	2

* 16 of these were not examined and were struck off Register in January, 1903, having been absent for over three months.

† 11 of these did not appear for examination.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."

Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE 2.

Comparative Table showing the Results of the Working of Part I (Females) of "The Contagious Diseases Prevention Act, 1885," during the years 1889, 1897, 1898, 1899, 1900, 1901, 1902, and 1903.

	CAPE TOWN.						WYNBERG.						SIMON'S TOWN.						EAST LONDON.					
	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903
Number of individual women examined during the year ...	235	462	497	454	408	528	475	238	56	35	31	35	40	45	46	45	53	63	60	48	42	44	46	45
Number of separate periodical medical examinations ...	2,490	3,783	3,156	3,383	1,513	2,079	1,826	995	211	346	403	312	353	368	1,230	1,128	481	1,169	2,067	1,705	1,841	1,157	1,230	1,128
Number of individual women found diseased ...	*	137	162	139	129	180	96	31	23	12	1	5	6	9	36	37	47	84	36	36	33	28	36	37
Number of admissions to Hospital ...	120	279	221	172	200	192	145	36	25	13	1	7	8	9	2	6	127	34	36	36	33	28	36	37
Average duration of stay in Hospital in days ...	72.83	31.0	48.5	44.6	43.1	42.2	40.5	55	Patients treated in Hospital, Cape Town.	Patients treated in Hospital, Wynberg.	Patients treated in Hospital, Simon's Town.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.	Patients treated in Hospital, East London.
Number of voluntary submissions ...	*127	462	497	454	408	528	475	238	56	35	31	32	38	45	40	38	44	56	50	48	38	39	40	38
Number of prosecutions under the Act ...	20	20	47	48	24	23	44	8	3	7	10	10	17	18	...	4	59	3	7	10	6	11	...	4
Total expenditure during the year ...	£2,681	£2,123	£2,100	£2,216	£2,077	£2,451	£2,228	£1,674	£73	£190	£190	£189	£238	£174	£159	£181	£653	£738	£730	£786	£618	£579	£644	£687

(Continued).

	KING WILLIAM'S TOWN.						PORT ELIZABETH.						UTTENHAGE.						ALL DISTRICTS.					
	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903
Number of individual women examined during the year ...	44	15	16	25	25	22	13	9	113	130	132	132	177	219	157	134	...	749	781	739	763	929	809	512
Number of separate periodical medical examinations ...	180	28	80	131	77	83	53	39	595	1,355	1,316	1,379	1,751	2,467	1,940	1,545	...	7,040	7,337	7,241	6,081	6,612	6,126	4,258
Number of individual women found diseased ...	10	1	8	12	10	9	6	4	63	63	64	57	81	71	64	45	...	254	278	255	277	334	233	146
Number of admissions to Hospital ...	48	1	11	15	12	6	4	4	77	63	64	57	81	71	64	45	...	397	340	293	352	373	291	157
Average duration of stay in Hospital in days ...	33.43	28.0	41.1	26.5	43.8	33.0	26.5	36	81.0	45.0	40.0	33.0	36.0	27.0	32.0	36.5	...	...	...	...	...	...	...	...
Number of voluntary submissions ...	33	15	16	25	25	22	13	9	89	129	112	116	154	181	118	102	...	741	746	716	730	882	758	467
Number of prosecutions under the Act ...	...	...	1	2	...	5	3	...	58	44	35	36	28	36	42	47	...	88	110	114	82	104	107	62
Total expenditure during the year ...	£412	£2	£4	£11	£3	£16	£11	£0	£686	£700	£708	£733	£783	£903	£890	£862	...	£4,101	£4,104	£4,312	£4,244	£4,692	£4,620	£3,908

* Information is imperfect. † Part I. of the Act was only proclaimed in Uttenhage on the 19th January, 1893.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."
Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE 3.

Comparative Table showing in Ratios per Centum the Results of the Working of Part I. (Females) of "The Contagious Diseases Prevention Act, 1885," during the years 1889, 1897, 1898, 1900, 1901, 1902, and 1903 in each of the Districts in which this Part of the Act is in operation.

	CAPE TOWN.						WYNBERG.						SIMON'S TOWN.						EAST LONDON.					
	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903
Proportion of separate examinations per woman	10·6	8·2	6·4	7·5	3·7	3·9	3·8	4·2	3·8	9·9	13·0	8·9	8·8	8·2	12·7	6·4	9·1	18·6	34·5	35·5	43·8	26·3	26·7	25·1
Proportion of individuals found to be diseased, per centum of women examined	*	29·7	32·6	30·6	31·6	34·1	20·2	13·0	41·1	34·3	3·2	14·3	15·0	20·0	4·4	20·0	88·7	54·0	60·0	75·0	78·6	63·6	78·3	82·2
Proportion of separate admissions to hospital, per centum of women examined	51·1	60·4	44·5	57·9	49·0	36·4	30·5	15·1	44·7	37·1	3·2	20·0	20·0	20·0	4·4	20·0	209·4	54·0	60·0	75·0	78·6	63·6	78·3	82·2
Proportion of re-admissions to hospital, per centum of diseased women	*	103·6	36·4	23·7	55·0	6·7	51·0	16·1	8·7	8·3	0·0	40·0	33·3	0·0	0·0	0·0	136·1	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Proportion of admissions to hospital, per centum of separate examinations	4·8	7·4	7·0	5·1	1·3	9·2	7·9	3·6	11·8	3·8	0·2	2·2	2·3	2·4	0·3	3·1	23·1	2·9	1·7	2·1	1·8	2·4	2·9	3·3
Proportion of voluntary sub-missions, per centum of women examined	*54·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	91·4	95·0	100·0	100·0	100·0	83·0	88·9	83·3	100·0	90·5	88·6	87·0	84·4
Proportion of prosecutions, per centum of women examined	1·3	4·3	9·5	10·6	5·9	4·4	9·3	3·4	5·4	20·0	32·3	28·6	42·5	40·0	17·8	3·3	111·5	4·8	11·7	20·8	14·3	25·0	0·0	8·8

* Information is imperfect.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

TABLE 3.—Continued.

	KING WILLIAM'S TOWN.						PORT ELIZABETH.						UITENHAGE.						ALL DISTRICTS.													
	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903	1889	1897	1898	1899	1900	1901	1902	1903
Proportion of separate examinations per woman	4.1	1.9	5.0	5.2	3.1	3.8	4.1	4.3	5.3	10.4	10.0	10.4	9.9	11.3	12.4	11.5	...	10.1	7.7	7.8	6.3	7.9	8.1	6.5	7.9	9.4	9.4	9.8	8.0	7.1	7.6	8.5
Proportion of individuals found to be diseased, per centum of women examined	68.2	6.7	50.0	48.0	40.0	40.9	46.2	44.4	55.7	48.5	48.5	43.2	45.8	32.4	40.8	33.6	...	27.3	0.0	23.1	7.7	5.9	20.0	26.7	61.8	33.9	35.6	34.5	36.3	36.0	28.8	28.5
Proportion of separate admissions to hospital, per centum of women examined	69.1	6.7	68.8	60.0	48.0	54.5	46.2	44.4	68.1	48.5	48.5	43.2	45.8	32.4	40.8	33.6	...	27.3	0.0	23.1	7.7	5.9	20.0	26.7	76.1	53.0	43.5	39.6	46.1	40.2	36.3	30.7
Proportion of re-admissions to hospital, per centum of diseased women	60.9	0.0	37.5	25.0	20.0	33.3	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	...	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.1	60.3	22.3	14.9	27.1	11.7	26.2	7.5
Proportion of admissions to hospital, per centum of separate examinations	26.7	3.6	13.8	11.5	15.6	14.5	11.3	10.3	12.9	4.6	4.9	4.1	4.6	2.9	3.3	2.9	...	2.7	0.0	3.0	1.2	0.7	2.5	4.1	9.8	5.6	4.6	4.0	5.8	5.6	4.8	3.7
Proportion of voluntary submissions, per centum of women examined	75.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	78.8	99.2	84.8	87.9	87.0	82.6	75.2	76.1	...	100.0	61.5	69.2	76.5	60.0	60.0	40.7	98.2	98.9	95.5	96.9	95.7	94.9	93.7	91.2
Proportion of prosecutions, per centum of women examined	0.0	0.0	6.3	8.0	0.0	22.7	23.1	0.0	51.3	33.3	26.5	27.3	15.8	16.4	26.8	35.1	...	90.9	76.9	61.5	38.5	23.5	40.0	13.3	25.5	11.7	14.1	15.4	10.7	11.2	13.2	12.1

* Information is imperfect. † Part I. of the Act was only proclaimed in Uitenhage on the 19th January, 1893.
(c) Excluding Cape Town, in regard to which information is imperfect. (f) Excluding East London, in regard to which information is imperfect.

ANNEXURE "C."
Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE 4.

RETURN of Expenditure incurred during the seven years ended 31st December, 1903 in connection with Part 1 of "The Contagious Diseases Prevention Act, 1885," in respect of each District in which this Part of the Act is in operation.

SERVICE.	CAPE TOWN.							WYNBERG.						
	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1. Cost of Buildings, Construction and Repairs.	89 14 10	110 3 8	207 0 9	90 17 11	238 0 2	141 7 5	154 17 10	...	...	...	...	...	...	...
2. Cost of Furniture, Utensils and Fittings.	20 17 7	29 12 0	8 6 0	32 15 1	51 11 9	21 16 5	4 4 6	...	...	...	...	...	...	...
3. Cost of Bedding and Clothing ...	81 6 1	69 11 8	53 2 2	53 18 8	80 7 9	94 1 1	28 0 6	...	...	...	9 0 0	...	...	...
4. Cost of Provisions, Medical Comforts, Fuel, Light, Soap, Lime and other Supplies for services.	725 4 7	739 7 8	729 0 4	710 4 6	847 0 4	712 10 7	491 14 8	...	...	...	1 0 0	...	...	...
5. Salaries and Allowances :—														
Medical Inspector ...	606 0 0	606 0 0	606 0 0	606 0 0	606 0 0	606 0 0	606 0 0	75 0 0	75 0 0	75 0 0	75 0 0	75 0 0	75 0 0	75 0 0
Lay Assistant ...	60 0 0	60 0 0	200 0 0	200 0 0	223 0 0	220 0 0	200 0 0	96 0 0	96 0 0	96 0 0	72 0 0	72 0 0	68 0 0	88 0 0
Matron. Nurses. Attendants, Guards, &c.	506 19 7	472 0 1	360 7 3	356 9 3	400 13 2	400 13 2	171 15 5	12 0 0	12 0 0	12 0 0	108 0 0	12 0 0	12 0 0	12 0 0
6. Miscellaneous or Special Expenses, Instruments and Appliances, Railway Fares, &c.	33 3 6	13 10 9	52 15 5	26 17 1	8 3 0½	32 6 2	17 18 9	7 18 8	7 10 8	6 8 4	2 0 0	6 6 9	4 4 8	6 7 6
Total ...	2,123 6 2	2,100 5 10	2,216 11 11	2,077 2 6	2,451 16 2½	2,228 14 10	1,674 11 8	190 18 8	190 10 8	189 8 4	258 0 0	174 6 9	159 4 8	181 7 6

SERVICE.	SIMON'S TOWN.							EAST LONDON.						
	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1. Cost of Buildings, Construction and Repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Cost of Furniture, Utensils and Fittings	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Cost of Bedding and Clothing ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Cost of Provisions, Medical Comforts, Fuel, Light, Soap, Lime and other supplies or services	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Salaries and Allowances :—														
Medical Inspector ...	200 0 0	200 0 0	200 0 0	235 19 5	200 0 0	200 0 0	200 0 0	50 0 0	50 0 0	50 0 0	50 0 0	37 0 0	50 0 0	50 0 0
Lay Assistant ...	50 0 0	33 6 8	60 0 0	74 4 0	84 0 0	84 0 0	84 0 0	...	...	...	...	...	...	...
Matron, Nurses, Attendants, Guards, &c.	81 0 0	129 0 0	79 5 0	59 18 0	79 14 0	99 0 0	99 0 0	12 0 0	12 0 0	12 0 0	12 0 0	12 0 0	12 0 0	12 0 0
6. Miscellaneous or Special Expenses, Instruments and Appliances, Railway Fares, &c.	5 2 8	0 1 3	0 7 6	49 6 0	0 0 9	36 7 3	1 0 9	...	...	...	...	30 8 11	52 16 5	12 4 11
Totals ...	598 7 10	590 2 9	586 11 1	618 16 9	579 13 1	644 1 9	687 11 0	62 0 0	68 4 3	62 0 0	62 0 0	79 8 11	114 16 5	74 4 11

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

TABLE 4.—Continued.

SERVICE.	KING WILLIAM'S TOWN.										PORT ELIZABETH.																													
	1897.		1898.		1899.		1900.		1901.		1902.		1903.		1897.		1898.		1899.		1900.		1901.		1902.		1903.													
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.										
1. Cost of Buildings, Construction and Repairs...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Cost of Furniture, Utensils and Fittings ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Cost of Bedding and Clothing ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Cost of Provisions, Medical Comforts, Fuel, Light, Soap, Lime and other supplies or services	200	9 7	83	3 5	94	0 2	108	1 1	171	13 0	140	1 3	110	10 0	229	7 1	263	3 6	323	4 4	314	8 3	389	17 11	358	17 1	340	12 4	314	8 3	389	17 11	358	17 1	340	12 4				
5. Salaries and Allowances :—	100	0 0	208	7 6	100	0 0	100	0 0	100	0 0	100	0 0	100	0 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0	218	5 0		
Medical Inspector ...	74	10 5	...	...	...	...	...	...	...	...	...	...	...	...	100	0 0	110	0 0	112	0 0	106	5 8	112	0 0	112	0 0	112	0 0	112	0 0	112	0 0	112	0 0	112	0 0	112	0 0
Lay Assistant ...	34	17 1	...	...	100	7 6	34	17 1	40	2 1	29	0 0	109	8 0	80	9 7	84	13 7	84	9 7	84	13 7	80	9 7	84	13 7	84	13 7	84	13 7	84	13 7	84	13 7	84	13 7	84	13 7
Matron, Nurses, Attendants, Guards, &c. ...	2	5 6	0	14 0	0	5 3	2	6 3	12	0 9	3	11 9	1	15 0	36	12 10	32	1 11	23	9 11	35	12 9	38	14 10	34	18 0	32	2 0	32	2 0	32	2 0	32	2 0	32	2 0	32	2 0		
6. Miscellaneous or Special Expenses, Instruments and Appliances, Railway Fares, &c.	412	2 7	292	4 11	333	1 11	346	5 11	398	6 3	481	16 11	321	13 0	4700	6 9	768	18 8	833	8 11	785	6 0	905	13 1	890	4 9	862	1 1	862	1 1	862	1 1	862	1 1	862	1 1	862	1 1		
Total

SERVICE.	UITENHAGE.										TOTAL EXPENDITURE.																			
	1897.		1898.		1899.		1900.		1901.		1902.		1903.		1897.		1898.		1899.		1900.		1901.		1902.		1903.			
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.		
1. Cost of Buildings, Construction and Repairs...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Cost of Furniture, Utensils and Fittings ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Cost of Bedding and Clothing ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Cost of Provisions, Medical Comforts, Fuel, Light, Soap, Lime and other supplies or services.	8	2 11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Salaries and Allowances :—	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0	75	0 0
Medical Inspector ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lay Assistant ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Matron, Nurses, Attendants, Guards, &c. ...	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0	12	0 0
6. Miscellaneous or Special Expenses, Instruments and Appliances, Railway Fares, &c.	4	16 2	7	1 3	4	17 3	3	19 6	3	17 9	2	17 3	2	9 9	2	9 9	2	9 9	2	9 9	2	9 9	2	9 9	2	9 9	2	9 9	2	9 9
Total ...	99	19 1	94	1 3	91	17 3	97	1 6	103	1 1	102	0 7	101	13 1	4,187	1 1	4,104	8 4	4,312	19 5	4,244	12 8	4,602	5 5	4,620	19 11	3,903	2 3		

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."

Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE 5.

Showing Total Number of Cases treated in the different Districts of the Colony Proper under Part II. of "The Contagious Diseases Prevention Act, 1885," during the Years 1897, 1898, 1899, 1900, 1901 and 1902.

[illegible]

King William's Town	83	60	896	875	95	72	1,013	1,113	57	64	692	703	73	63	809	810	60	60	861	798	44	64	878	868
King William's Town
Knysna	1	2	29	38	1	3	26	32	5	1	28	34	3	4	16	35	2	4	16	26	1	1	27	39
Komgha	6	13	3	...	15	9	...	...	...	1	3	...	11	8	...	...	10	9	1	...	5	3
Kuruman	2	3	...	...	3	11	...	...	...	1	...	...	...	...	...	...	...	1	...	...	2	1
Ladismith	99	45	...	...	78	208	...	...	...	...	...	...	...	...	...	...	53	60	...	...	103	154
Mafeking	25	29	6	10	22	23	5	9	28	31	3	13	4	21	3	2	20	19	...	...	23	16
Malmesbury	1	4	2	...	2	...	...	...	...	...	6	1	9	5	...	...	73	82	2	1	27	31
Middelburg	1	...	2	...	...	...	...	8	...	1	...	...	...	...	10	9	...	...	4	2
Molteno	10	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	4	...	...	1	4
Montagu	4	...	1	5	6	9	1	4	...	...	...	...	2	6	...	...	1	5	...	...	2	...
Mossel Bay	3	...	...	6	2	...	...	...	...	...	...	1	2	...	...	...	...	1	...	3	...
Murraysburg	2	5	...	...	1	2	...	...	...	9	...	...	3	1	...	...	5	...	...	...	...	...
Namagualaad	7	2	...	...	...	...	...	...	5	2	...	...	3	2	...	...	...	...
Namagualaad	6	9	1	...	28	37	...	...	50	54	...	...	66	96	2	...	25	33
Oudtshoorn	3	9	82	84	5	6	81	112	1	...	83	75	...	1	81	97	1	...	...	20	...	...	81	88
Paarl	9	12	...	1	16	13	...	...	25	20	1	...	17	15	...	...	15	...	1	...	5	15
Peddie	2	5	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Philipstown	15	17	3	2	1	1	3	2	2	2	...	...	...	...	...	...	...	...	1	...	2	8
Piquetberg	7	...	1	...	8	6	...	...	9	10	...	...	9	5	...	...	4	5	...	...	...	...
Port Elizabeth	10	...	...	4	8	...	...	...	10	...	...	10	4	...	...	15	...	...	...	...	...
Port Nolloth	5	8	...	...	12	8	...	...	4	...	...	...	14	...	...	...	11	...	...	...	23	19
Prieska	9	26	3	9	18	17	1	4	...	24	...	1	9	16	2	...	5	14	...	...	8	12
Prince Albert	1	6	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	3	9
Queenstown	2	...	...	...	...	1	...	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...
Richmond	4	17	...	...	5	5	...	...	7	...	...	...	...	6	...	...	...	...	...	...	...	...
Riversdale	9	11	...	...	7	6	...	...	1	7	...	...	9	7	...	...	3	5	...	...	4	...
Robertson	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simon's Town	19	...	...	1	1	...	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...
Somerset East	24	...	2	...	18	14	...	...	...	...	...	1	...	14	...	...	4	8	...	...	5	10
Stellenbosch	1	...	...	...	...	4	...	...	4	3	...	...	1	2	...	...	1	3
Steytlerville	15	16	...	...	4	6	...	...	5	5	...	...	5	14	...	...	3	4	...	...	2	59
Steytlerville	5	5	6	6	4	6	8	13	3	4	7	10	3	2	8	12	2	...	10	11	...	...	5	2
Stockenström	1	1	...	...	1	...	...	...	...	...
Stutterheim	2	...	...	...	...	...	...	2	...	...	...	...	...
Sutherland	1	3	3	5	...	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Swellendam	1	...	...	...	1	1	...	...	3	...	...	...	...	...	1	...	...	4	...	...	...	...
Tarka	6	1	...	...	5	2	...	...	...	...	7	...	...	...	...	...
Taungs
Tulbagh	8	...	...	...	1	...	...	...	...	...	...	...	6	...	...	...	...
Uitenhage	1	1	...	...	2	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Uniondale	4	3	1	...	11	3	...	...	4	1	...	...	...	...	...	...	...	1	...	...	...	...
Uniondale	2	1	16	19	1	...	17	11	...	...	26	29	...	...	19	15	1	...	9	11	...	...	10	6
Van Rhynsdorp	2	...	4	8	...	...	2	2	1	3	6	7	...	2	7	8	...	...	1	4	...	...	1	...
Victoria East	18	...	...	33	20	2	...	...	17	...	...	30	20	...	...	23	...	2	...	19	15
Victoria West	5	2	28	...	...	1	10	6	...	3	33	...	3	2	14	10	1	...	42	17	1	8	30	23
Vryburg	15	2	3	26	26	1	...	26	19	1	4	18	11	...	...	10	8	...	...	6	10
Willowmore	7	...	14	...	2	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wodehouse	15	6	...	10	24	3	4	13	30	1	...	27	2	...	...	21	16	...	...	13	13
Worcester	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wynberg	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	83	60	896	875	95	72	1,013	1,113	57	64	692	703	73	63	809	810	60	60	861	798	44	64	878	868

* No Returns were received from these Districts owing to their disturbed state on account of the War.

NATIVE TERRITORIES.—The following cases were treated under Part II. of "The Contagious Diseases Prevention Act, 1885":—

In 1897, 3 cases (2 C. M. and 1 C. F.).	In 1899, 12 cases (3 E. M., 4 C. M., and 5 C. F.).	In 1901, 35 cases (3 E. M., 21 C. M., and 11 C. F.).
„ 1898, 11 cases (3 E. M., 3 C. M., and 5 C. F.).	„ 1900, 5 cases (4 C. M. and 1 C. F.).	„ 1902, 21 cases (9 C. M. and 12 C. F.).

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."

Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE 6.

Showing for the several Districts of the Colony particulars of Cases treated under the provisions of Part II. of "The Contagious Diseases Prevention Act, 1885," during the year ended 31st December, 1903.

DISTRICT.	Total Number of Patients Treated during Year ended 31st December, 1903.				IN HOSPITAL.								OUTDOOR.							
	Persons				No. of Patients remaining under Treatment on the 31st December, 1902.				No. of Fresh Cases coming under Treatment during 1903.				No. of Patients remaining under Treatment on 31st December, 1903.				Number of Discharges during 1903.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Aberdeen	4	2	1	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	2
Albany	41	15	1	15	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Albert	7	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alexandria	3	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aliwal North	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barkly West	37	16	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Beaufort West	28	19	3	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Britstown	37	19	6	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
De Aar	14	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caledon	13	7	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calvinia	6	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cape Town	44	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carnarvon	13	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceres	1	8	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clanwilliam	23	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Colesberg	20	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cradock	12	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fraserburg	9	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
George	21	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glen Grey	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gordonia	17	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Graaff-Reinet	10	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hanover	11	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hay	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Herbert	22	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hope Town	19	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Strydenburg	1	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Humansdorp	15	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jansenville	12	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kenhardt	10	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kimberley	247	66	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

King William's Town	...	62	28	34	1	8	27	26	25	34	47	47	65	46	171	144	150	152	258	314	108	114	18	23	105	83	173	241
Keiskama Hoek	...	8	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Middle Drift	...	8	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Knysna	...	23	9	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuruman	...	283	122	161	31	49	91	112	50	83	12	2	...	...	57	56	...	...	...	...	...	...	...	...	...	...	...	...
Ladismith	...	24	12	12	1	...	3	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Mafeking	...	85	39	46	1	...	4	...	1	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
Malmesbury	...	11	6	5	...	...	...	...	3	4	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Hopefield	...	6	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Middelburg	...	4	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mosiel Bay	...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Murraysburg	...	26	12	14	4	5	...	...	5	9	...	...	...	...	1	5	...	...	...	...	...	...	...	...	...	...	...	...
Namaqualand	...	61	30	31	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Garies	...	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oudtshoorn	...	125	74	51	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calitzdorp	...	37	18	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paarl	...	17	12	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wellington	...	9	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Philipstown	...	4	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Petrusville	...	8	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Porterville (Piquetberg)	...	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Port Nolloth	...	27	15	12	1	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...
Prieska	...	14	7	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Queenstown	...	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Richmond	...	9	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Riversdale	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Robertson	...	8	6	1	3	2	3	...	6	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerset East	...	15	1	14	3	9	...	...	1	6	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
Pearston	...	5	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stellenbosch	...	4	4	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Steynsburg	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Steytlerville	...	16	7	9	1	1	1	3	1	1	...	...	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...
Swellendam	...	4	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tarka	...	...	77	124	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Taung	...	201	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tulbagh	...	3	...	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uniondale	...	26	11	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Van Rhynsdorp	...	17	8	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Victoria West	...	29	13	16	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vosburg	...	3	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vryburg	...	72	48	24	7	6	22	10	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Willowmore	...	9	6	3	1	1	3	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Worcester	...	38	15	23	1	6	14	17	7	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	2,023	1,003	1,020	153	149	442	405	308	312	47	47	65	46	171	144	150	152	258	314	108	114	18	23	105	83	173	241

The average duration of treatment of in-door patients=116·89 days. The average duration of treatment of out-door patients=154·88 days.

† Removed to Somerset Hospital.

* Result of the treatment in regard to nine indoor patients (4 males and 5 females) not known.

‡ Result of the treatment in regard to nine out-door patients (4 males and 5 females) not known.

From the following districts "Nil" Returns have been received :—

Venterstad (Albert), Lady Grey (Aliwal North), Barkly East, Bathurst, Bedford, Bredasdorp, Durbanville (Cape), Cathcart, Maraisburg (Cradock), East London, Fort Beaufort, Adelaide (Fort Beaufort), Williston (Fraserburg), Herschel, Komgaha, Molteno, Montagu, Peddie, Piquetberg, Port Elizabeth, Prince Albert, Sterkstroom (Queenstown), Simon's Town, Somerset West (Stellenbosch), Stockenström, Sutherland, Uitenhage, Victoria East, Wodehouse, Indwe, Wynberg.

Native Territories.—With the following exceptions, from all the Districts in the Native Territories "Nil" Returns have been received :—

In Mount Fletcher (East Griqualand): 2 Europeans (1 male and 1 female), suffering from Hereditary Syphilis, received out-door treatment.

In Butterworth (Transkei), 2 Coloured persons (1 male and 1 female), suffering from Secondary Syphilis, received out-door treatment.

In Bizana (Pondoland), 20 Coloured persons (6 males and 13 females) suffering from Secondary Syphilis, and 1 Coloured female suffering from Hereditary Syphilis received out-door treatment.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."

Statistical Returns under "The Contagious Diseases Prevention Act, 1885."

TABLE 7.

Showing for the several districts of the Colony, the Race of the persons treated under the provisions of Part II. of "The Contagious Diseases Prevention Act, 1885," during the year ended 31st December, 1903, together with the nature of the disease.

District	Total.			Primary.			Secondary.			Tertiary.			Hereditary.			Other Venereal Diseases.		
	E.			E.			E.			E.			E.			E.		
	C.			C.			C.			C.			C.			C.		
	M.	F.	M.	M.	F.	M.	M.	F.	M.	M.	F.	M.	M.	F.	M.	M.	F.	M.
Aberdeen	1	2	1	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...
Albany	8	1	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Albait	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alexandria	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Aliwal North	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barkly West	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Beaufort West	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Britstown	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
De Aar	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
De Aar	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caledon	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calvinia	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cape Town	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carnarvon
Ceres	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Clanwilliam
Colesberg	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cradoek	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fraserburg	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
George	1	2	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glen Grey	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gordonia	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Graaff-Reinet	6
Hanover	6
Hay	3
Herbert	7
Hope Town	12
Strydenburg	1

Humansdorp
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NOTE.—The Districts from which "Nil" Returns have been received are identical with those appearing on Table No. 6, both Tables 6 and 7 being compiled from the same Return.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "C."
Statistical Tables under "The Contagious Diseases Prevention Act, 1885."

TABLE 8.
Showing the Expenditure incurred in connection with Part II. of "The Contagious Diseases Prevention Act 1885," in the various Districts of the Colony during the seven years ended 31st December, 1903.

DISTRICTS.	Statement showing the Total Expenditure incurred during the Years 1897, 1898, 1899, 1900, 1901 and 1902, in carrying out the provisions of Part II. of "The Contagious Diseases Prevention Act, 1885," in the several Districts of the Colony, according to Returns rendered by the Resident Magistrates thereof.										Statement showing the Expenditure incurred during the Year ended 31st December, 1903, in carrying out the Provisions of Part II. of "The Contagious Diseases Prevention Act, 1885," in the several Districts of the Colony, according to Returns rendered by the Resident Magistrates thereof.									
	1897.	1898.	1899.	1900.	1901.	1902.	District-Surgeons' Traveling Expenses.	District-Surgeons' Fixed Allowance.	District-Surgeons' Fee for Medical Attendance and Medicines.	Cost of Buildings, Construction and Repairs.	Rent of Buildings.	Cost of Furniture, Utensils and Fittings.	Cost of Bedding and Clothing.	Provisions, Medical Comforts, Fuel, Light, Soap, Lime and other supplies or services.	Salaries, and Allowances of Nurses, Attendants, Guards, &c.	Payments to Managers of General Hospitals for Treatment and Maintenance of cases.	Miscellaneous or Special Expenses.	Total.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.														
Aberdeen	124 19 16.	123 2 8	3 0 0	83 4 0	65 7 6	104 2 2	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Albany	439 11 1	378 2 6	254 10 0	186 15 0	296 15 0	300 3 0	1 10 0	...	0 15 0	...	...	0 12 0	...	2 0 7	2 6 6	232 17 6	...	232 17 6	7 4 1	1
Albany	120 11 16.	135 18 0	77 1 5	4 5 6	56 2 11	7 1 0	0 15 0	...	4 10 0	...	...	...	...	...	...	...	...	5 5 0	6	6
Alexandria	32 8 4	18 2 11	7 1 8	6 0 0	3 7 6	14 11 4	...	...	3 10 0	...	...	...	...	20 16 11	13 10 0	...	...	37 17 5	0	0
Aliwal North	17 12 0	18 4 3	*	7 17 6	4 17 2	4 8 0	...	...	12 7 0	...	...	...	...	...	...	...	...	12 7 6	0	0
Barkly East	Nil	Nil	*	Nil	Nil	Nil	...	...	...	...	...	...	...	...	...	...	...	Nil	0	0
Barkly West	35 9 7	913 5 6	*	370 18 0	528 12 11	679 13 1	3 0 0	...	80 0 3	2 8 0	...	...	...	472 19 11	31 5 0	...	...	299 12 8	0	0
Bathurst	0 15 0	4 2 6	1 2 6	6 0 0	10 10 0	0 15 0	7 10 0	...	52 2 8	...	...	...	...	...	...	...	...	7 10 0	0	0
Beaufort West	562 13 0	506 4 2	577 0 0	377 14 5	563 0 7	300 0 0	...	...	3 0 0	...	...	14 14 1	...	239 2 0	108 11 0	...	...	436 7 4	0	0
Bedford	Nil	1 2 6	3 0 0	Nil	Nil	Nil	...	...	...	...	...	...	...	...	...	...	...	21 17 4	0	0
Bredasdorp	Nil	Nil	Nil	Nil	Nil	Nil	...	...	...	...	...	...	...	...	...	...	...	3 0 0	0	0
Britstown	367 1 2	457 12 0	512 4 0	433 0 0	574 7 4	458 3 0	...	...	106 19 0	...	...	...	...	426 17 9	47 17 3	...	...	581 14 0	0	0
Caledon	161 14 7	62 17 2	116 15 1	72 2 0	79 10 1	189 9 11	...	...	28 0 0	...	...	...	...	107 1 8	36 0 0	...	...	171 1 8	0	0
Calvinia	321 18 9	402 14 1	312 13 8	*	*	34 15 9	...	...	2 2 9	1 19 0	26 0 0	6 14 0	...	10 19 8	30 0 0	...	...	77 15 5	0	0
Cape ...	Nil	Nil	Nil	0 5 0	Nil	Nil	1 10 0	...	29 4 0	...	...	...	...	...	...	...	...	Nil	0	0
Carnarvon	592 16 9	500 14 5	335 3 4	265 11 7	223 6 3	243 8 0	...	...	...	...	...	...	...	117 4 4	88 0 0	...	...	236 4 2	0	0
Cathcart	Nil	Nil	21 7 0	Nil	34 14 11	Nil	...	...	...	...	...	...	...	...	...	...	...	Nil	0	0
Ceres	19 6 5	46 0 0	66 17 11	30 5 0	34 19 5	11 13 4	...	...	...	20 0 0	...	...	...	4 13 8	1 0 0	...	...	Nil	0	0
Clanwilliam	126 12 4	212 3 7	354 3 2	404 0 9	133 7 1	185 17 1	...	...	30 12 6	...	...	...	...	131 19 11	36 10 0	...	...	25 13 8	0	0
Colesberg	Nil	54 15 8	292 10 5	150 6 7	3 5 15	3 0 6	...	...	72 11 0	...	...	...	...	263 0 1	18 0 0	...	...	238 2 5	0	0
Cradoek	326 1 7	371 4 4	331 0 16	403 9 9	410 9 3	489 0 9	...	...	27 0 0	...	...	4 13 6	...	82 14 0	60 0 0	...	...	353 11 1	0	0
East London	Nil	Nil	Nil	35 2 2	Nil	26 16 10	...	...	...	...	...	...	...	...	...	...	...	176 7 6	0	0
Fort Beaufort	Nil	Nil	2 0 0	Nil	Nil	Nil	...	...	...	...	...	...	...	...	...	...	...	Nil	0	0
Fraserburg	478 16 3	464 13 4	309 18 1	141 18 9	232 2 0	82 17 5	...	...	18 14 0	...	...	...	...	...	...	...	...	Nil	0	0
George ...	49 2 1	37 13 11	25 2 1	31 10 7	5 1 9	2 5 0	...	...	39 17 5	14 4 6	...	...	...	...	...	...	...	47 14 0	0	0
Glen Grey	174 18 0	9 7 6	18 7 6	46 2 6	25 5 6	37 0 0	...	...	1 17 0	...	...	...	...	...	2 14 0	...	...	56 15 9	0	0
Gordonia	151 14 6	26 7 6	11 6 8	25 0 4	33 12 6	20 10 0	...	...	29 15 9	...	...	...	...	...	...	...	...	1 17 6	0	0
Graaff-Reinet	264 13 3	265 7 7	253 17 2	273 0 2	361 2 8	192 7 7	...	...	45 4 2	...	...	...	...	46 9 9	0 15 0	...	...	77 11 0	0	0
Hanover	32 9 9	6 18 5	83 11 8	95 17 2	58 12 1	78 17 0	...	...	24 12 9	...	...	...	...	51 5 9	49 0 0	...	...	145 9 11	0	0
Hay ...	249 5 8	358 0 0	*	144 2 0	322 9 7	212 5 1	...	...	4 2 6	...	...	...	...	40 1 1	18 5 6	...	...	82 18 10	0	0
Herbert	212 15 9	218 8 0	*	7 3 1	123 14 7	244 11 3	...	...	31 10 0	...	...	...	...	55 5 6	61 15 6	...	...	145 6 0	0	0
Herschel	Nil	Nil	*	Nil	123 14 7	244 11 3	...	...	...	...	...	...	...	58 16 10	40 17 5	...	...	137 0 0	0	0
Hope Town	205 5 11	268 6 7	376 14 2	231 1 8	252 0 11	161 19 4	...	...	72 0 0	...	...	...	...	...	...	...	...	Nil	0	0
Humansdorp	45 7 6	96 16 9	87 12 9	63 4 0	9 10 6	4 12 9	...	...	17 9 11	...	...	...	...	22 11 11	9 19 0	...	...	184 4 4	0	0
Jansenville	330 12 8	147 14 3	149 15 1	234 1 7	210 1 0	130 12 0	...	...	31 8 6	...	...	...	...	78 0 0	18 5 0	...	...	55 8 10	0	0
Kenhardt	146 18 6	320 0 0	*	59 8 6	21 12 1	2 15 9	...	...	3 2 6	...	...	...	...	11 1 8	...	...	...	127 13 11	0	0
Kimberley	1,840 0 0	1,840 0 0	*	1,056 19 6	2,182 0 0	2,898 16 0	...	...	...	...	...	...	...	2,805 4 6	...	...	...	14 4 2	0	0

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

GOVERNMENT AND STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 1.

RETURN of Patients treated during the year ended 31st December, 1903.

Institution,	Nominal Number of Beds.	Number of In-Patients admitted during the Year			Average stay of Patients, Days.	Average daily number of In-Patients.	Total number of daily units during the year.		Average Number of Patients treated per bed during the year.	Case Mortality per cent.	Out-Patients: Number of Attendances.
		Free.	Paying and Contributing.	Government Chronic Sick and Others.			Total.	European.				Coloured or Native.
A. STATE-AIDED.											
COLONY PROPER.											
<i>Albany</i> — Albany General Hospital ...	77	371	94	Not separated	465	29.75	38.00	7,300.00	6.04	10.50	317
<i>Cape</i> — Somerset Hospital ...	191	1,695	676	...	2,371	27.40	178.00	46,803.00	12.41	9.45	6,233
Suburban Hospital, Woodstock ...	20	89	148	...	237	22.58	14.66	4,299.70	11.85	11.39	160
Rondebosch and Mowbray Cottage Hospital...	30	44	160	...	204	22.00	12.30	4,489.50	6.80	9.31	...
Victoria Cottage Hospital, Wynberg ...	34	92	244	...	336	33.00	30.38	7,665.00	9.88	14.29	...
Eaton Convalescent Home, Plumstead ...	40	353	80	...	433	20.23	24.00	8,030.00	10.83	...	...
Cape Town Free Dispensary ...	...	334(a)	...	...	334	...	...	...	...	28.74(b)	9,236
<i>Cradock</i> — Queen's Central Hospital ...	49	148	128	...	276	29.09	22.00	5,475.00	5.63	15.22	...
<i>East London</i> — Frere Hospital ...	52	305	352	...	657	19.44	35.00	8,639.55	12.63	10.65	612
<i>Graaff-Reinet</i> — Midland Hospital ...	41	49	48	...	97	26.34	7.00	730.00	2.37	12.37	1,200
<i>Kimberley</i> — Kimberley Hospital ...	318	1,138(c)	763	270	2,171	30.50	187.00	22,232.15	6.83	13.40	1,480
<i>Mafeking</i> — Victoria Hospital ...	40	36	206	...	242	19.46	12.90	3,853.00	6.05	5.79	...

<i>Oudtshoorn</i> — Royal South Western Hospital	...	29	71	28	...	99	25·81	7·00	1,277·50	1,277·50	3·41	12·00	15
<i>Port Elizabeth</i> — Provincial Hospital	...	155	1,112	519	9	1,640	27·50	123·56½	27,389·00	17,710·00	10·58	11·10	8,991
Victoria Memorial Home	...	14	5	2	...	7	Chronic Sick	7 on 31.12.03	Not Stated	Not Stated	Chronic Sick	...	...
<i>Queenstown</i> — Frontier Hospital	...	64	120	150	Not separated	270	39·20	29·00	6,194·00	4,391·00	4·21	11·80	78
<i>Fryburg</i> — Vryburg Hospital	...	16	12	159	...	171	21·00	9·84	2,521·00	1,071·00	10·69	2·92	...
NATIVE TERRITORIES.													
<i>Butterworth</i> — Butterworth Cottage Hospital	...	13	84	62	...	146	27·34	10·94	423·40	3,569·70	11·23	2·05	...
<i>Mount Currie</i> — East Griqualand and Usher Memorial Hospital, Kokstad	...	13	16	68	...	84	25·03	5·76	970·90	1,131·50	6·46	14·29	7
<i>Umtata</i> — Umtata Cottage Hospital	...	15	123	34	...	157	12·11	5·21	540·20	1,361·45	10·47	9·55	973
Total	...	1,211	6,197	3,921	279	10,397	27·13	759·55	274,316·25	274,316·25	8·67	10·17	29,302
B. GOVERNMENT INSTITUTIONS.													
COLONY PROPER.													
<i>Albany</i> — Chronic Sick Hospital	...	179	...	...	212	212	Chronic Sick	169·00	44,530·00	17,155·00	Chronic Sick	11·79	...
<i>Cape</i> — Old Somerset Hospital	...	453	...	...	361	361	Chronic Sick	340·00	52,195·00	71,905·00	Chronic Sick	24·21	...
<i>King William's Town</i> — Grey Hospital	...	63	328	108	...	436	29·23	34·91	4,007·70	8,734·45	6·92	12·16	3,922
	...	695	328	108	573	1,009	29·23(d)	543·91	100,732·70	97,794·45	6·92(d)	16·39	3,922

(a) Patients visited in their own homes. (b) Of Patients attended in their own homes. (c) Of this number, 452 had paid "Hospital Tax."
(d) Exclusive of Chronic Sick Hospital, Grahamstown and Old Somerset Hospital, Cape Town.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

GOVERNMENT AND STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 2.
RETURN OF STAFFS.
(At date of Inspection in each case).

INSTITUTION.	Nominal No. of Beds.	Daily Average No. of Patients.	MEDICAL STAFF.		ADMINISTRATIVE STAFF.				NURSING STAFF.				DOMESTIC STAFF.			LAUNDRY AND SEWING ROOM STAFF.		OTHERS ; For Farm, Garden, or Grounds, etc.		Total Whole Time Staff.				
			Visiting.	Total of Annual Salaries or Honoraria to Mem- bers of Visiting Medical Staff.	Secretary.		Clerks and others.	Dispensers.	Matron.	Senior Nurses.	Junior Nurses and Probationers.	Ward Attendants or Dressers.		Housekeepers.	House Steward or Issuer of Stores.	M.	F.	M.	F.					
					Whole Time.	Part Time, or in Receipt of Annual Honorarium.						M.	F.											
A. STATE-AIDED INSTITUTIONS.																								
COLONY PROPER.																								
Albany—																								
Albany General Hospital	...	77	38.00	3	£150	1	...	1	...	...	1	2	12	1	...	1	...	5	7	...	1	...	...	31
Cape—																								
Somerset Hospital	178.00	10 Medical Officers	Hon.	4	1	...	2	2	1	14	39	2	...	...	...	24	5	...	2	...	...	101
Suburban Hospital, Woodstock...	...	20	14.66	1 Dentist.	£100	...	...	(1 Hon.)	...	...	1	1	6	...	...	...	...	1	3	...	...	...	...	12
Rondebosch & Mowbray Cottage Hospital	...	30	12.30	7	Hon.	...	...	1	...	...	1	3	4	...	...	...	...	1	3	...	...	...	...	12
Victoria Cottage Hospital, Wynberg	...	34	30.38	8	Hon.	...	...	1	...	...	1	4	6	...	...	...	...	1	3	...	...	...	1 (Part time)	16
Eaton Convalescent Home, Plumstead...	...	40	24.00	1	£25	...	...	1	...	...	1	1 (Assist. Matron)	...	...	...	...	...	1	3	...	...	2	...	8
Cape Town Free Dispensary	1	£200	...	...	(1 Hon.)	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Craddock—																								
Queen's Central Hospital	...	49	22.00	3	Hon.	...	1	...	...	...	1	1	4	...	...	1	...	2	5	...	1	...	1 (Part time)	16
East London—																								
Frere Hospital...	...	52	35.00	4	Hon.	1	...	...	...	...	1	4	7	...	...	1	...	3	6	...	...	...	...	23
Graaff-Reinet—																								
Midland Hospital	...	41	7.00	3	£150	...	1 Superintendent	1	...	...	1	...	...	2	1	...	...	2	3	...	...	...	...	10

Kimberley— Kimberley Hospital	...	...	318	187·00	7	Hon.	2	1	...	...	1	1	1	1	25	21	...	...	2	...	30	16	...	3	...	...	103
Mafeking— Victoria Hospital	...	...	40	12·90	All Medical Practitioners in Mafeking	Hon.	...	...	1	...	...	...	1	2	2	2	...	...	...	...	5	2	...	...	2	...	11
Oudtshoorn— Royal South Western Hospital...	...	...	29	7·00	2	Hon.	...	...	1	...	...	...	1	2	2	2	...	...	...	...	...	3	2(Part time)	...	...	...	8
Port Elizabeth— Provincial Hospital	...	...	155	123·56	5 Medical Officers 1 Dentist	Hon.	2	1	...	...	...	1	1	10	25	2	...	...	...	1	14	13	...	9	...	...	79
Victoria Memorial Home	...	...	147	on 31·12·03	...	...	...	...	(1 Hon.)	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	...	3
Queenstown— Frontier Hospital	...	...	64	29·00	2	£210	...	...	1	...	...	...	1	1	6	...	...	...	1	...	2	7	...	...	4	...	22
Vryburg— Vryburg Hospital	...	...	16	8·50	Medical Practitioners in Town and Neighbourhood. No Official Staff.	...	...	...	1	...	...	...	1	1	2	1	2	...	...	...	...	...	...	...	Convict Labour	...	7
NATIVE TERRITORIES.																											
Butterworth— Butterworth Cottage Hospital	...	...	13	10·94	...	...	1	...	1	...	...	...	1	...	1	1	...	...	...	...	1	1	...	...	...	...	6
Mount Currie— East Griqualand and Usher Memorial Hospital, Kokstad	...	...	13	5·76	2	Hon.	...	...	1	...	...	...	1	1	2	...	...	...	...	...	1	3	...	2(Part time)	...	...	8
Umtata— Umtata Cottage Hospital	...	...	15	5·21	1	£50	...	...	1	...	...	...	1	...	2	1	...	...	...	...	1	2	...	2(Part time)	...	...	7
B. GOVERNMENT INSTITUTIONS.																											
COLONY PROPER.																											
Albany— Chronic Sick Hospital	...	...	179	169·00	1	£200	...	1 Lay Superintendent	...	...	...	...	...	1	8	3	...	1	...	...	4	...	...	4	1	...	23
Cape— Old Somerset Hospital	...	...	453	340·00	...	...	1	1 Superintendent.	...	...	2	...	1	...	...	17	13	...	...	...	3	1	...	1	...	...	40
King William's Town— Grey Hospital	...	...	63	34·91	...	...	1	...	Dispenser acts	...	...	1	1	3	4	...	...	...	...	...	3	7	...	6	8	...	34

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

REVENUE OF STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS DURING THE YEAR ENDED 31ST DECEMBER, 1903.

TABLE 3.

INSTITUTION.	Nominal Government Grant in aid of Maintenance.*	ORDINARY REVENUE (exclusive of Balance from 1902).						PROPORTION OF TOTAL ORDINARY REVENUE contributed by						EXTRAORDINARY REVENUE.		
		Government Grant in aid of Maintenance actually paid.		Subscriptions, Donations and Bequests from		Receipts from Paying Patients.	Receipts from Other Sources.	Total.	General Public.	Paying Patients	Public Bodies.	Govern-ment.	Other Sources.	From Government (Special Grants).	From Other Sources.	Total.
		£	s. d.	£	s. d.											
COLONY PROPER.																
<i>Albany</i> —																
Albany General Hospital ...	3,250 0 0	3,250 0 0	...	506 18 4	942 16 6	160 12 3	£ s. d.	4,860 7 1	10·43	19·39	...	65·87	3·31	...	832 0 0	832 0 0
<i>Cape</i> —																
Somerset Hospital ...	11,000 0 0	11,000 0 0	765 0 0	5,396 13 3	5,658 2 2	1,484 14 2	£ s. d.	24,304 9 7	22·20	23·28	3·15	45·26	6·11	3,395 17 0	8,108 8 4	11,504 5 4
Suburban Hospital, Woodstock ...	475 0 0	500 0 0	90 0 0	1,407 18 1	1,007 7 3	...	£ s. d.	3,005 5 4	46·85	33·52	2·99	16·64	...	...	...	...
Rondebosch & Mowbray Cottage Hospl.	375 0 0	300 0 0	50 0 0	795 12 5	828 1 8	17 10 9	£ s. d.	1,991 4 10	39·96	41·58	2·51	15·07	·88	1,532 10 9	842 12 0	2,375 2 9
Victoria Cottage Hospital, Wynberg ...	800 0 0	800 0 0	120 0 0	801 2 9	1,265 6 3	234 7 4	£ s. d.	3,220 16 4	24·87	39·29	3·72	24·84	7·28	770 16 0	531 0 0	1,301 16 0
Eaton Convalescent Home, Plumstead	500 0 0	500 0 0	...	322 13 7	116 12 0	945 11 9	£ s. d.	1,884 17 4	17·12	6·18	...	26·53	50·17	...	503 3 0	503 3 0
Cape Town Free Dispensary ...	...	200 0 0	...	392 10 11	145 18 2	134 12 5	£ s. d.	873 1 6	44·96	16·71	...	22·91	15·42	...	638 10 0	638 10 0
<i>Cradock</i> —																
Queen's Central Hospital ...	1,125 0 0	898 11 8	...	666 12 5	622 3 10	...	£ s. d.	2,187 7 11	30·48	28·44	...	41·08	...	...	107 10 10	107 10 10
<i>East London</i> —																
Frere Hospital ...	2,500 0 0	2,500 0 0	100 0 0	1,770 18 0	1,552 13 9	497 13 3	£ s. d.	6,421 5 0	27·57	24·18	1·56	38·93	7·76	...	...	...
<i>Gravaff-Reinet</i> —																
Midland Hospital ...	1,250 0 0	625 0 0	...	200 14 7	239 0 1	...	£ s. d.	1,064 14 8	18·85	22·45	...	58·70	...	...	370 0 0	370 0 0
<i>Kimberley</i> —																
Kimberley Hospital ...	6,100 0 0	6,936 0 0	...	1,335 6 6	4,999 8 4	11,657 18 5	£ s. d.	24,928 13 3	5·36	20·05	...	27·82	46·77	...	...	...
<i>Mafeking</i> —																
Victoria Hospital ...	750 0 0	1,125 0 0	100 0 0	394 13 7	920 8 8	138 18 2	£ s. d.	2,679 0 5	14·73	34·36	3·73	41·99	5·19	...	...	...

<i>Oudtshoorn</i> — Royal South Western Hospital	...	£ 500	s. 0	d. 0	£ 500	s. 0	d. 0	£ 50	s. 0	d. 0	£ 452	s. 1	d. 10	£ 130	s. 16	d. 0	£ 55	s. 0	d. 0	£ 1,187	s. 17	d. 10	38s.06	11s.01	4s.21	42s.09	4s.63	£ ...	£ 2,000	s. 0	d. 0	£ 2,000	s. 0	d. 0		
<i>Port Elizabeth</i> — Provincial Hospital	£ 6,200	s. 0	d. 0	£ 6,200	s. 0	d. 0	£ 100	s. 0	d. 0	£ 2,131	s. 2	d. 0	£ 3,661	s. 18	d. 10	£ 1,094	s. 19	d. 4	£ 13,188	s. 0	d. 2	16s.16	27s.77	7s.	47s.01	8s.30	£ 1,011	s. 10	d. 11	£ 511	s. 2	d. 6	£ 1,522	s. 13	d. 5
Victoria Memorial Home	...	£ 175	s. 0	d. 0	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...	£ 2,721	s. 12	d. 6	£ 44	s. 0	d. 0	£ 140	s. 5	d. 2	£ 2,905	s. 17	d. 8	93s.66	1s.51	...	...	4s.83	£ ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...
<i>Queenstown</i> — Frontier Hospital	...	£ 1,250	s. 0	d. 0	£ 1,250	s. 0	d. 0	£ 75	s. 0	d. 0	£ 459	s. 12	d. 4	£ 1,134	s. 4	d. 3	£ 233	s. 0	d. 1	£ 3,151	s. 16	d. 8	14s.58	35s.99	2s.38	39s.66	7s.39	£ ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...		
<i>Vryburg</i> — Vryburg Hospital	...	£ 1,265	s. 10	d. 0	£ Institution	s. ...	d. ...	£ ...	s. ...	d. ...	£ entirely maintained by Government.	s. ...	d. ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...	...	...	...	100s.00	...	£ ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...
NATIVE TERRITORIES.																																				
<i>Butterworth</i> — Butterworth Cottage Hospital	...	£ 325	s. 0	d. 0	£ 325	s. 0	d. 0	£ 300	s. 0	d. 0	£ 22	s. 2	d. 1	£ 88	s. 12	d. 6	£ ...	s. ...	d. ...	£ 735	s. 14	d. 7	3s.00	12s.05	40s.78	44s.17	...	£ ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...		
<i>Mount Currie</i> — East Griqualand and Usher Memorial Hospital, Kokstad	...	£ 500	s. 0	d. 0	£ 750	s. 0	d. 0	£ ...	s. ...	d. ...	£ 176	s. 18	d. 5	£ 285	s. 13	d. 2	£ ...	s. ...	d. ...	£ 1,212	s. 11	d. 7	14s.59	23s.56	...	61s.85	...	£ 650	s. 0	d. 0	£ 966	s. 11	d. 7	£ 1,616	s. 11	d. 7
<i>Umtata</i> — Umtata Cottage Hospital	...	£ 630	s. 0	d. 0	£ 560	s. 0	d. 0	£ ...	s. ...	d. ...	£ 63	s. 19	d. 3	£ 80	s. 5	d. 9	£ ...	s. ...	d. ...	£ 704	s. 5	d. 0	9s.08	11s.40	...	79s.52	...	£ ...	£ ...	s. ...	d. ...	£ ...	s. ...	d. ...		
Total	...	£ 38,970	s. 10	d. 0	£ 38,219	s. 11	d. 8	£ 1,750	s. 0	d. 0	£ 20,019	s. 2	d. 10	£ 23,723	s. 9	d. 2	£ 16,795	s. 3	d. 1	£ 100,507	s. 6	d. 9	19s.92	23s.60	1s.74	38s.03	16s.71	£ 7,360	s. 14	d. 8	£ 15,410	s. 18	d. 3	£ 22,771	s. 12	d. 11

* Half the nominal grant for the financial year 1902-03 *plus* half that for 1903-04.

- (a) This does not include an annual maintenance charge borne by Government for Repairs and Insurance amounting during 1903 to £1,500.
- (b) In addition Government defrays cost of maintenance of buildings.
- (c) Includes Pauper Grant of £836.
- (d) Includes Hospital Tax, £8,316 16s., and amounts paid by Government in respect of patients—Contagious Diseases Patients, £2,805 4s. 6d.; Other Patients, £535 17s. 11d.
- (e) Includes Hospital Tax of 1s. per month per native registered for employment, which during 1903 yielded £8,267 9s. 0d.; it also includes De Beers' annual contribution of £1,000.
- (f) Includes £532 4s. for Government Chronic Sick.
- (g) Includes £80 for Government Chronic Sick and £68 17s. for Government Venereal Patients.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

GOVERNMENT AND STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 4.

Return of Ordinary Expenditure during the year ended 31st December, 1903.

Name of Institution.	Salaries and Wages to Staff (exclusive of Fees to Visiting Medical Officers).		Visiting Medical Officers' Fees.		Provisions and Supplies to Patients and Staff.		Stimulants.		Medicines, Dressings, and Instruments, (including those supplied to Out-patients).		Bedding, House-linen etc.		Furniture and Re-pairs.		Clothing and Uniforms.		Washing.		Funerals.		Sanitary.		Lighting.		Fuel.		Printing, Stationery, etc.		Insurance, Interest, etc.		Miscellaneous.		Total Ordinary Expenditure.		
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	
A. STATE-AIDED.																																			
COLONY PROPER.																																			
<i>Albany</i> —																																			
Albany General Hospital	1,266	8 2	150 0 0		1,882	12 7	45 17 6		433	19 1	83 3 9	371	12 4		221	16 5	72 6 0	33 0 0	82 4 0		84 1 7		115	13 7			74 4 2	43	12 5	...		4 930	11 7		
<i>Cape</i> —																																			
Somerset Hospital	6,806	9 8	...	0 0	7,326	12 11	407 1 4		771	17 11	936 6 2	883	10 10		225 1 0		1,554	11 7	145 1 0	...	375	10 4	560	16 8			314 2 9	34	11 6	654	19 4	20,996	13 0		
Suburban Hospital, Woodstock.	407	18 6	100 0 0		979	9 11	Included under 3		396	7 1	36 11 9	42	13 2		...		230 2 3	14 13 6	...	...	207	15 9	Included under 12			29 9 8	7 2 0	87	18 3	2,540	1 10				
Rondebosch and Mowbray Cottage Hospital.	569	17 4	...		640	18 2	Included under 3		221	1 11	15 17 3	7	12 6		32	13 8	168 7 11	...	26 4 6		164 4 3		Included under 12			18 4 11	76 5 9	86	2 6	2,027	10 8				
Victoria Cottage Hospital, Wynberg.	661	17 3	...		1,152	4 4	Included under 3		495	1 10	23 8 4	136	10 8		60 4 6		158	13 9	...	...	78 4 3		Included under 12			30 19 9	31	12 6	94	13 5	3,061	15 1			
Eaton Convalescent Home, Plumstead.	561	14 0	25 0 0		713	17 9	2 2 7		20 3 8		46 10 9	62	7 0		...		45 15 0	...	...		49 8 0		Included under 12			242	19 2	Included under 14	114	19 5	1,884	17 4			
Cape Town Free Dispensary	215	0 0	200 0 0		...		...		148 5 1		...	42	19 3		...		...	...	...		12 7 9		...			26 17 9	2 8 0	109	1 11	756	19 9				
<i>Cradock</i> —																																			
Queen's Central Hospital	543	6 0	...		1,154	12 11	Included under 3		182 8 11		54 6 9	14	13 0		Included under 6		74 1 3	29 15 0	...	...	207 3 1		Included under 12			25 6 7	46	19 10	...		2,332	13 4			
<i>East London</i> —																																			
Frere Hospital	1,412	10 0	...		1,672	0 0	98 6 3		288 3 8		85 10 6	560	12 10		31	10 8	292 0 0	40 15 6	84 18 0		156	19 6	113	11 7			93	14 10	41 5 1	207	14 2	5,179	12 2		
<i>Port Natal-Heidelberg</i> —																																			
Midland Hospital	401	3 0	150 0 0		520	2 8	25 17 6		220 11 3		10 10 7	52	5 3		...		29 2 3	12 0 0	...	...	3 6 5		Included under 3			4 10 2	5 0 6	56	3 9	1,490	13 4				
<i>Kimberley</i> —																																			
Kimberley Hospital	6,739	10 2	Included under 1		8,701	8 11	Included under 3		1,508 9 6		251 19 9	856 4 2		300 6 5			1,380 0 0	83 1 2	585 12 6		889 0 9		938 15 4			99 4 9	230	11 5	Included under 15		22,764	4 11			
<i>M. Fickling</i> —																																			
Victoria Hospital	720	17 3	...		997	0 4	77 3 9		54 9 8		Included under 3	Included under 3		Included under 3			159 0 0	...	127 3 0		122 3 10		Included under 12			25 7 0	...	...	...		2,383	4 10			

<i>Oud'shoorn—</i> Royal South - Western Hospital.	297	10	0	...	479	17	8	...	78	11	10	46	11	9	69	1	11	Included under 6	30	5	0	...	...	Included under 3	41	8	0	13	4	112	2	0	1,156	2	0													
<i>Port Elizabeth—</i> Provincial Hospital	3,658	13	10	...	4,240	13	1,206	2	1	995	1	6	77	13	0	1,345	16	11	115	15	4	78	15	0	...	655	8	11	136	8	7	233	9	3	12,790	14	3											
Victoria Memorial Home	71	17	0	...	78	13	9	...	1	3	9	Charged to Extra-ordinary Revenue	...	...	...	...	...	...	...	2	15	8	...	6	7	6	4	5	0	8	2	9	20	13	0	203	4	11										
<i>Queenstown—</i> Frontier Hospital	751	4	8	210	0	6	1,254	2	9	37	0	6	233	11	4	Included under 6	47	4	0	214	14	4	13	0	0	42	0	0	191	6	11	Included under 12	26	5	10	21	8	3	268	10	9	3,513	7	10				
<i>Vryburg—</i> Vryburg Hospital	689	18	1	...	1,220	9	1	Included under 3	159	18	5	15	9	0	26	2	6	...	10	12	9	...	...	48	12	9	Included under 12	...	...	28	2	7	2,199	5	2													
NATIVE TERRITORIES. <i>Butterworth—</i> Butterworth Cottage Hospital.	179	10	0	25	9	0	488	12	1	3	3	6	...	8	11	0	...	...	25	6	0	8	10	0	...	Included under 3	0	4	0	...	1	6	0	786	6	6												
<i>Mount Currie—</i> East Griqualand and Usher Memorial Hos- pital, Kokstad.	276	18	5	...	339	1	3	31	1	6	57	15	4	24	0	0	48	15	4	54	2	0	6	15	6	10	16	0	8	8	10	2	0	948	7	4												
<i>Umtata—</i> Umtata Cottage Hospital	174	12	0	50	0	0	248	5	9	Included under 5	123	10	8	Included under 8	19	1	3	13	3	0	22	2	0	4	3	0	13	7	4	Included under 3	38	15	4	11	8	3	4	15	5	12	2	6	735	9	9			
Total	26,406	15	4	910	9	0	34,090	15	11	953	16	6	6,485	14	1	1,941	10	8	4,548	12	11	1,017	15	1	0	512	3	8	978	12	10	3,274	16	7	2,035	11	10	1,244	6	6,794	12	10	2,098	0	10	92,511	15	7
B. GOVERNMENT IN- STITUTIONS. COLONY PROPER. <i>Albany—</i> Chronic Sick Hospital	1,458	15	9	200	0	0	2,768	9	2	107	17	8	94	7	8	216	8	2	Included under 6	437	13	1	Included under 1	Included under 16	Convict Labour	Included under 13	558	2	0	...	...	...	225	12	5	6,067	5	11	(d)									
<i>Cape—</i> Old Somerset Hospital	3,473	14	2	Included under 1	4,864	7	5	Included under 3	316	5	1	1,398	4	6	297	7	3	Included under 6	748	18	0	399	4	0	(c)	877	12	11	Included under 12	...	...	...	77	7	8	12,525	4	0										
<i>King William's Town—</i> Grey Hospital	1,588	10	6	...	1,473	3	8	18	13	6	160	7	5	60	1	5	38	16	2	91	5	0	43	15	0	88	4	6	58	5	6	213	9	3	...	Insur- ance de- frayed by P. W. Dept.	283	13	6	4,154	12	5						
Total	6,521	0	5	200	0	0	9,106	0	3	126	11	2	571	0	2	1,674	14	1	336	3	5	474	0	1	840	3	0	442	19	0	160	7	6	935	18	5	771	11	3	586	13	7	22,747	2	4

(a) This includes an amount of £198 11s. 6d. paid to persons employed on farm and garden, the produce of which supplied to the Institution during the year is valued at £500. This latter amount is not included in the figures above given under Provisions and Supplies.
(b) Including Uniform and Commission.
(c) Including House Necessaries.
(d) Includes Farm and Garden—£140 13s. 2d., produce of which supplied to Institution during the year is valued at £156.
(e) Includes Disinfectants.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

GOVERNMENT AND STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 5.

Tariff of Charges for Paying and Contributing Patients (including Charges for Patients from Government Departments or Public Bodies).

Name of Hospital.	Average Cost per Patient.	Private Ward.	Semi-Private Ward.	General Ward.	Police Forces and C.M.R.	Railway Employees	Government Pauper or Veneral.
A—STATE AIDED. COLONY PROPER.							
<i>Albany</i> — Albany General Hospital ...	7 2·01	10/- or 7/6	7/6	5/-	3/6	3/-	2 6
<i>Cape</i> — Somerset Hospital ...	6 5·55	12/-	...	6/-	6/-	6/-	...
Suburban Hospital, Woodstock...	9 5·93	15/-	10/6	7/6 to 5/-	6/-	6/-	...
Rondebosch and Mowbray Cottage Hospital ...	9/0·38	12 6	7/6	3/- to 9d.	3/-	4 6	...
Victoria Cottage Hospital, Wynberg ...	5/6·27	12/6	6 6	5/- to 9d.	3/6	5/-	...
Eaton Convalescent Home, Plumstead ...	4 3·64	...	3/6	3 6	3/6 and 3/-	4 6	...
Cape Town Free Dispensary ...	1 6·98	6d. or 1/-	per visit for medicine or dressings.				
<i>Craddock</i> — Queen's Central Hospital ...	5/9·71	10/-	6 6	5/-	3/6	3 6	...
<i>East London</i> — Frere Hospital... ..	8 1·31	10/-	7 6	5/-	3 -	3/-	...
<i>Graaff-Reinet</i> — Midland Hospital	11 8·03	7 6	...	5/-	3 -	3/-	...
<i>Kimberley</i> — Kimberley Hospital	6/7·34	15/-	10/-	5/-* Children and Coloured, 8s.	Not stated	Not stated	E. 4/6, C. 3/-
<i>Mafeking</i> — Victoria Hospital	10 1·47	10/6	7 6	5 6	4 6 Bechuana's Police, 5s.	5/-	...
<i>Oudtshoorn</i> — Royal South Western Hospital...	9 1·78	10/-	6 0	4/6 to 1/-	No Special Rate.	...	...
<i>Port Elizabeth</i> — Provincial Hospital	5 8·07	12 6 & 7/6	...	5/6	5/-	3/-	2/-
Victoria Memorial Home ...	Those	able to pay, £6 per month.					
<i>Queenstown</i> — Frontier Hospital	6 7·66	10 6	8/6	5/-	4/-	3/-	Veneral 3/-, Chronic Sick 2/-
<i>Vryburg</i> — Vryburg Hospital	12/2·96	10/-	...	5/- to 3/-	3/-	E. 5/-, C. 3/-	...
NATIVE TERRITORIES.							
<i>Butterworth</i> — Butterworth Cottage Hospital ...	3 11·26	...	3/-	£1 per month to natives able to pay	No Special Rate.	No Special Rate.	...
<i>Mount Currie</i> — East Griqualand and Usher Memorial Hospital, Kokstad...	9/0·26	7 6	...	E. 5/-, C. 1/-	No Special Rate.	...	...
<i>Umtata</i> — Umtata Cottage Hospital ...	7 8·88	9/-	...	6/-	3/-	...	...
Total Average	6 7·12	10/8	7/-	4 6	3 11	4 1	2 9
B.—GOVERNMENT INSTITUTIONS. COLONY PROPER.							
<i>Albany</i> — Chronie Sick Hospital	1/10·25	...	...	3/- or less	...	...	...
<i>Cape</i> — Old Somerset Hospital... ..	2/0·08	...	...	3/- or less	...	...	...
<i>King William's Town</i> — Grey Hospital	6 6·24	10/- & 7/6	5/-	E. 2/-, C. 1/-	2/-	2/-	...
Total Average	3 11·10	8 9	5/-	2 6	2/-	2/-	...

* Natives 30/- per case, but if registered for employment in Kimberley, free of charge.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

GOVERNMENT AND STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 6.

Return of Average Cost per Patient during the year ended 31st December, 1903.

INSTITUTION.	Average Daily Cost per Patient.					Amount of Average Daily Cost borne by	
	Salaries and Wages to Staff.	Provisions and Supplies to Patients and Staff.	Stimulants.	Other Items.	Total.	Ordinary Sources of Revenue.	Government.
	1	2	3	4			
A. STATE-AIDED.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
COLONY PROPER.							
<i>Albany.</i>							
Albany General Hospital	2 0·51	2 8·66	0 0·80	2 4·04	7 2·01	2 4·50	4 9·51
<i>Cape.</i>							
Somerset Hospital	2 1·14	2 3·06	0 1·50	1 11·85	6 5·55	3 6·45	2 11·10
Suburban Hospital, Woodstock ...	1 10·79	3 7·93	Included under 2	3 11·21	9 5·93	7 10·98	1 6·95
Rondebosch and Mowbray Cottage Hospital.	2 6·46	2 10·26	Included under 2.	3 7·66	9 0·38	7 8·05	1 4·33
Victoria Cottage Hospital, Wynberg...	1 2·33	2 0·94	Included under 2.	2 3·00	5 6·27	4 1·81	1 4·46
Eaton Convalescent Home, Plumstead	1 4·07	1 7·56	0 0·06	1 3·95	4 3·64	3 1·94	1 1·70
Cape Town Free Dispensary ...	Per attendance or visit by Medical Officer			1 6·98	1 6·98	1 2·63	0 4·35
<i>Craddock.</i>							
Queen's Central Hospital	1 4·24	2 10·51	Included under 2.	1 6·96	5 9·71	3 5·07	2 4·64
<i>East London.</i>							
Frere Hospital	2 2·54	2 7·41	0 1·85	3 1·51	8 1·31	4 11·43	3 1·88
<i>Graaff-Reinet.</i>							
Midland Hospital	4 3·77	4 0·86	0 2·43	3 0·97	11 8·03	4 9·83	6 10·20
<i>Kimberley.</i>							
Kimberley Hospital	1 11·70	2 6·59	Included under 2.	2 1·05	6 7·34	4 9·27	1 10·07
<i>Mafeking.</i>							
Victoria Hospital	3 0·74	4 2·83	0 3·93	2 5·97	10 1·47	5 10·46	4 3·01
<i>Oudtshoorn.</i>							
Royal South Western Hospital ...	2 3·95	3 9·08	Included under 2.	3 0·75	9 1·78	5 3·57	3 10·21
<i>*Port Elizabeth.</i>							
Provincial Hospital	1 7·47	1 10·57	0 1·10	2 0·93	5 8·07	3 0·07	2 8·00
<i>Queenstown.</i>							
Frontier Hospital	1 9·79	2 4·44	0 0·84	2 4·59	6 7·66	4 0·07	2 7·59
<i>Vryburg.</i>							
Vryburg Hospital	3 10·10	6 9·55	Included under 2.	1 7·31	12 2·96	—	12 2·96
NATIVE TERRITORIES.							
<i>Butterworth.</i>							
Butterworth Cottage Hospital ...	1 0·32	2 5·37	0 1·39	0 4·18	3 11·26	2 2·39	1 8·87
<i>Mount Currie.</i>							
East Griqualand and Usher Memorial Cottage Hospital, Kokstad.	2 7·61	3 2·71	0 3·55	2 10·39	9 0·26	3 5·30	5 6·96
<i>Umtata.</i>							
Umtata Cottage Hospital	2 4·35	2 7·33	Included under 4.	2 9·20	7 8·88	1 7·03	6 1·85
Total Average	1 11·61	2 5·14	0 0·85	2 1·52	6 7·12	4 1·03	2 6·09
B. GOVERNMENT INSTITUTIONS.							
COLONY PROPER.							
<i>Albany.</i>							
Chronic Sick Hospital.	0 6·09	0 10·13	6 0·40	0 5·63	1 10·25	—	1 10·25
<i>Cape.</i>							
Old Somerset Hospital	0 6·68	0 9·35	—	0 8·05	2 0·08	—	2 0·08
<i>King William's Town.</i>							
Grey Hospital	2 5·92	2 3·75	0 0·35	1 8·22	6 6·24	—	6 6·24
Total Average	1 4·60	1 5·46	0 0·24	1 0·80	3 11·10	—	3 11·10

* Victoria Memorial Home, opened on 30th July, 1903. Return of cost per Patient not supplied.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "D."

STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 7.

RETURN of Extraordinary Expenditure incurred during the year ended
31st December, 1903.

Institution.	Works involving Extraordinary Expenditure.	Total Extraordinary Expenditure.
		£ s. d.
COLONY PROPER.		
<i>Albany</i> —		
Albany General Hospital ...	Victoria Fever Hospital, almost completed, is on General Hospital land, but otherwise independent.	...
<i>Cape</i> —		
Somerset Hospital...	Surgeon's Residence and Nurses' Home ...	5,489 3 0
Rondebosch and Mowbray Cottage Hospital.	Ward Extensions and Nurses' Quarters ...	2,576 15 2
Victoria Cottage Hospital, Wynberg.	Erection of temporary accommodation and extension scheme.	771 11 10
<i>Cradock</i> —		
Queen's Central Hospital ...	Repayment of Loans ...	286 7 8
<i>East London</i> —		
Frere Hospital ...	Drainage (charged to Ordinary Revenue, Contract Price, £140).	140 0 0
<i>Kimberley</i> —		
Kimberley Hospital ...	New Ward (C.D.), New Operating Theatre, Ambulance, etc.	4,809 0 0
<i>Mafeking</i> —		
Victoria Hospital ...	Drainage, Structural Alterations, etc. ...	476 9 2
<i>Port Elizabeth</i> —		
Provincial Hospital ...	Drainage, Fire Appliances, etc. ...	630 8 1 (a)
Victoria Memorial Home ...	Building, Furnishing, etc. ...	2,562 7 10
<i>Queenstown</i> —		
Frontier Hospital ...	Water-boring (charged to Ordinary Revenue) ...	181 3 1
<i>Vryburg</i> —		
Vryburg Hospital ...	Furniture and Equipment ...	26 2 6
NATIVE TERRITORIES.		
<i>Mount Currie</i> —		
East Griqualand and Usher Memorial Hospital, Kokstad	Hospital Extension, erection of new Wards, Operating Room, etc.	1,700 0 0 (b)
	£	19,649 8 4

No Extraordinary Expenditure was incurred by the following Hospitals during the year :—

Cape—

Suburban Hospital, Woodstock.
Eaton Convalescent Home, Plumstead.
Cape Town Free Dispensary.

Graaff-Reinet.

Midland Hospital.

Oudtshoorn.

Royal Southern Western Hospital.

Butterworth—

Butterworth Cottage Hospital.

Umtata.

Umtata Cottage Hospital.

(a) Not including £946 17s. 5d. for general repairs charged to Ordinary Revenue. (b) Contract Price.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE “D.”

STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 8.

PROJECTED WORKS.

INSTITUTION.	PROJECTED WORKS.	ESTIMATED COST.	AMOUNTS PAID OR PROMISED IN RESPECT OF PROJECTED WORKS				
			By Public Bodies and General Public.		By Government.		
			Paid.	Promised.	Paid.	Provided on Estimates.	
COLONY PROPER.							
<i>Caprivi</i> — Somerset Hospital	£ s. d. 26,000 0 0	£ s. d. 6,415 16 9	£ s. d. ?	£ s. d. ...	£ s. d. 6,000 0 0
Suburban Hospital, Woodstock	3,500 0 0	800 0 0	...	...	750 0 0
Rondebosch and Mowbray Cottage Hospital	1,600 0 0	...	...	...	...
Victoria Cottage Hospital, Wynberg	2,000 0 0	...	...	...	...
Eaton Convalescent Home, Plumstead	8,000 0 0	531 0 0	...	...	2,000 0 0
Cape Town Free Dispensary	?
<i>Windhoek</i> — Queen's Central Hospital	...	12,000 0 0(a)	...	11,500 0 0(b)	...	...	2,000 0 0
<i>East London</i> — Frederic Hospital	...	1,500 0 0	...	292 16 11	300 0 0	...	...
<i>Graaff-Reinet</i> — Midland Hospital	...	1,050 0 0	...	...	...	...	...
<i>Kimberley</i> — Kimberley Hospital	...	370 0 0	...	370 0 0(c)	...	...	...
<i>Port Elizabeth</i> — Provincial Hospital	...	?
<i>Queenstown</i> — Frontier Hospital	...	30,000 0 0 6,947 0 0	...	2,499 15 1	?	...	1,500 0 0
<i>Vryburg</i> — Vryburg Hospital	...	1,200 0 0	...	533 0 0	...	...	...
	...	200 0 0	...	...	...	...	Institution at present maintained by Government.
NATIVE TERRITORIES.							
<i>Butterworth</i> — Butterworth Cottage Hospital	...	800 0 0	...	...	250 0 0(d)	...	250 0 0
<i>Umtata</i> — Umtata Cottage Hospital	...	5,000 0 0	...	1,411 0 0	...	Site granted by Government.	1,500 0 0

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE “D.”

STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.

TABLE 9.

FINANCIAL POSITION AT THE END OF 1903.

INSTITUTION.	Assets, exclusive of buildings, land and other property used for the purposes of the Institution.										Liabilities.							
	Cash at Bank and in hand.		Investments on Capital Account: Received on account of.				Sundry Debtors.			Total.	Over-draft.	Loans.	Sundry Creditors.	Total.				
			Special Purposes.	Buildings and Equipment.	General Purposes.	Paying patients fees outstanding.		Other.										
						£	s.		d.						£	s.	d.	
COLONY PROPER.																		
Albany—	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.			
Albany General Hospital	806	2	6	...	...	...	7,311	9	8	237	15	0	79	7	10	113	6	8
Cape—	1,283	8	9	...	5,352	1	6	7,898	7	0	...	...	...	...	...	1,224	11	9
Somerset Hospital	393	7	5	...	...	...	...	...	...	73	19	0	...	...	...	...	...	...
Suburban Hospital, Woodstock	...	...	...	500	0	0	...	...	...	182	3	0	...	...	...	374	18	6
Rondebosch and Mowbray Cottage Hospital...	96	11	5	...	530	4	2	752	9	4	344	12	5	0	19	3	8	0
Victoria Cottage Hospital, Wynberg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,724	16	7
Eaton Convalescent Home, Plumstead	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cape Town Free Dispensary	60	11	3	...	737	19	10	3,499	16	11	...	...	...	...	...	4,298	8	0
Craddock—	...	...	...	6	9	0	*292	16	11	...	340	17	6	...	...	...	...	...
Queen's Central Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	640	3	5
East London—	56	8	7	...	Land yielding annual rental of £10 10s.	Land yielding annual rental of £137 10s.	...	...	...	270	11	6	11	0	0	...	...	...
Frere Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Griff-Reinet—	345	9	3	...	...	...	...	...	...	126	19	0	...	...	...	472	8	3
Midland Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kimberley—	2,337	15	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kimberley Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mafeking—	25	13	0	...	...	...	...	...	...	153	0	3	...	...	...	178	13	3
Victoria Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oudtshoorn—	204	3	5	...	...	...	...	...	...	100	0	0	57	10	0	2,361	13	5
Royal South Western Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Port Elizabeth—	211	14	7	2,300	0	0	2,861	3	1	3,650	0	0	...	...	...	9,248	12	8
Provincial Hospital	446	5	9	...	...	...	...	...	...	Not stated.	7	0	0	...	...	...	...	...
Victoria Memorial Home	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Queenstown—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Frontier Hospital	...	...	...	...	...	...	...	...	...	516	14	0	...	...	...	...	...	...
Vryburg—	...	...	...	...	...	...	...	...	...	60	0	0	...	...	...	...	...	...
Vryburg Hospital	...	...	...	Institution at present maintained by Government.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
NATIVE TERRITORIES.																		
Butterworth—	19	14	2	...	...	...	...	...	...	...	...	...	...	...	...	19	14	2
Butterworth Cottage Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mount Currie—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
East Griqualand & Usher Memorial Hospital,	119	17	10	...	Not stated.	...	...	...	...	55	9	6	...	...	...	Not stated.	...	...
Kokstad	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Umtata—	186	5	11	...	1,411	0	0	...	...	No account kept.	...	...	...	...	...	...	...	...
Umtata Cottage Hospital	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Of this amount, £107 10s. 10d. is on loan to Maintenance Account.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "E."

INSPECTION OF GOVERNMENT AND STATE-AIDED HOSPITALS AND KINDRED INSTITUTIONS.—
REPORT BY DR. J. A. MITCHELL, ASSISTANT MEDICAL OFFICER OF HEALTH FOR THE
COLONY.

TO THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

I have the honour to forward herewith Reports of inspections made by me, in accordance with your instructions, of twenty Government and State-Aided Hospitals and kindred Institutions in the Colony and Native Territories.

The series of inspections was commenced on 27th September, 1903, and concluded on 25th April, 1904, the considerable period taken to complete the work being due to the fact that the inspections had, for the most part, to be carried out, and the reports compiled in the intervals between other work of a more urgent nature, and more especially work in connection with Plague.

Statistical Tables and communicated information.

In the case of the earlier inspections made during the latter part of the past year, the statistical information attached in tabular form to each of the Reports was, in the first instance, obtained for the period from 1st January, 1902, to 30th June, 1903. As requested by you, I have since procured the statistics up to the end of 1903, and revised the Statistical Tables accordingly.

With regard to these statistics, and to other items of information communicated or furnished to me by officers of Institutions or others, I would point out that, whilst such information has in all cases been obtained from the best available sources, and whilst I have not included in these Reports any statements or statistics the accuracy of which I have any reason to doubt, I cannot accept personal responsibility for the accuracy in all particulars of statistics or statements which have not come within my own personal knowledge or observation. Owing to the absence of uniformity in the keeping of Hospital accounts and records, and to the fact that the Forms upon which the Annual Reports and Statements regarding Patients Treated, Revenue, Expenditure, and other matters have hitherto been furnished to Government are incomplete in several respects, unsatisfactory in others, and not very well adapted for purposes of comparison, considerable difficulty has, in several cases, been experienced in procuring the necessary statistical information in a suitable form, and, indeed, owing to the incompleteness of the Hospital records, it has, in a few instances, been found impossible to obtain all the desired particulars. In connection with this and other matters relating to the inspections, I desire to express my thanks to the officers of the various Institutions for the assistance rendered to me, which has, in many cases, entailed a good deal of time and work on their part.

Procedure followed in making the Inspections.

As far as practicable, the inspections were of the nature of surprise visits, the notice given being, in the majority of cases, only some twenty-four hours or less. In most cases I was afforded an opportunity, after the inspection had been completed, of meeting the Managing Body of the Institution, or its Executive Committee, and of discussing with the members such matters as appeared to me to call for consideration; I may add, however, that such meetings were invariably of an informal character, and that it was in all cases made clear that any views expressed or recommendations or suggestions made by me were to be regarded as purely unofficial until endorsed by Government. Such recommendations and suggestions were invariably welcomed, and criticisms received in the spirit in which they were made, the hope being very generally expressed that inspections by a Government Medical Officer would be repeated annually.

Difficulties of Hospital Administration.

It is impossible, without actual experience of the local conditions, to fully realise the difficulties which the Management of a Hospital in a small up-country town have to contend with. When it is considered that, in many such cases, the Hospital is of only recent date; that the members of the Board of Management have, as a rule, had no previous experience of the practical details of Hospital Administration; that, with the exception of a short tour of inspection made by you in 1894, and of periodic inspections by the Departmental Inspector of Accounts, who has not as yet visited the Hospitals in the Native Territories and whose duties cover only a part of the field of Hospital Administration, but little advice or assistance in such matters has hitherto been rendered by Government; that hitherto no detailed Reports of Hospitals and kindred

Institutions have been published containing information regarding the administrative methods of each and the results achieved, in a form easily accessible and adapted for purposes of comparison, it is not a matter for surprise that some anomalies of administration have arisen. With very few exceptions, my experience has been that the Management have used every endeavour to promote the interests of the Institution under their control; in several Institutions I have found them fully aware of defects in their system of administration but unable to correct these defects owing to the want of experienced advice. I have, I may say without exception, found Managing Bodies of Institutions ready and willing to accept and act upon any useful and practicable suggestion. In order to prepare the way for such suggestions, it has been necessary during the course of my tour and in these Reports, to clearly point out and criticise defects, but I have done so in a spirit of assistance and, as far as was possible for me, with a due appreciation of all the circumstances.

Certain matters not dealt with in the Reports.

In the individual Reports, a number of matters of very general importance and affecting a number, and in some instances, all or nearly all, of the Institutions inspected, have been very briefly referred to, my intention being to deal with such matters more fully in this covering Report. On the other hand several questions are raised or suggested in the separate Reports which are best treated on general lines and not in connection with any particular Institution. I shall, however, here confine my attention to questions which more especially fall within the province of an Inspecting Officer, leaving the broader matters of Hospital administration and general policy, and the comparison of the Statistical Returns, to be dealt with by you.

Register of In-Patients.

In the case of a large percentage of the Hospitals inspected, the "Register of In-Patients" was more or less unsatisfactory in form. It is not only essential that every Hospital should have a proper Register of this nature, but it is desirable that the Registers in the various Hospitals should be uniform. With this object in view I have drawn up the following Form:—

..... HOSPITAL.

REGISTER OF IN-PATIENTS.

[illegible]

It is convenient to give each patient a Register Number, to be also shown on the bed-card, temperature chart, or other record or paper relating to the case. In order to facilitate the making of statistical Returns of Patients, the best plan is to commence a new series of numbers each year, patients remaining over from the previous year being re-numbered from one upwards, their original numbers being also shown, in brackets, and a red line drawn across the Register at the foot of the list and above the name of the first admission during the year.

Other Records which should be kept.

A concise record should be kept of all Out-Patients treated and of the number of their attendances. At least in the case of Hospitals where a Resident Medical Staff is employed, clinical records of all Patients treated should be kept. These may either

be in Case-Book form or on loose sheets, to be kept at the head of the Patient's bed and filed with the Temperature Charts and other records of the case on his discharge or death; the former system is, however, the more satisfactory. In all cases proper records of all *post-mortem* examinations performed at the Hospital should be preserved, a special "Register of Post-Mortems" being kept for the purpose. Records of all operations should also be kept, and should shew the name, age, sex, race and disease of the patient, the operation performed, and the date of operation, the names of the Operator and Anæsthetist, the anæsthetic used and the result of the operation. A record of the visits of Medical Officers should be kept in all Hospitals, each being required to enter his name, with the hour and date of visit, in the Register on the occasion of each visit paid by him to the Hospital. A board or slate should be kept in a prominent position in the entrance hall or office, shewing, for the information of Medical Officers, the daily number of Patients and of vacant beds. Prescriptions for Medicines should invariably be in writing by a Medical Officer on the bed-card; care should be taken to ensure that under no circumstances are Medicines administered to patients unless so prescribed.

Official Visitors.

A system of weekly visits by Official Visitors appointed by the Management should exist in all Hospitals. As a rule, such Visitors are appointed from amongst the members of the Managing Body; in the case of one or two Hospitals in the Colony, however, Annual Subscribers are afforded an opportunity of visiting and inspecting either jointly with a Member of the Board or independently, a plan which for several reasons seems to be a good one. Such visits should be of the nature of surprises and the Official Visitors should be required to submit a formal Report with answers to a series of specific questions regarding the results of their inspection. In cases where two Visitors make a joint inspection, the preferable plan is for each to furnish a separate Report. The Reports may either be entered in an "Official Visitors' Book," to be kept at the Hospital, or be made out, in the first instance, on separate sheets, these being subsequently pasted, in chronological order, into a suitable book. The latter system has the advantage that the Report may be drawn up by the Official Visitor at his leisure, and, in consequence, more care is likely to be taken in its compilation.

I attach (Annexure "A") an Official Visitors' Report Form, which has been drawn up with a view to meeting the requirements of State-aided Hospitals and similar Institutions.

Nursing Staffs of Hospitals.

In several of the Hospitals inspected there appears to be a tendency to appoint more Nurses than are absolutely necessary for the carrying on of the work of the Institution. It should be clearly recognised by the Managing Body of every Hospital that, while it is essential that the Nursing Staff should be adequate, an excess of Nurses tends to interfere with discipline and promote inefficiency rather than good nursing and sound administration. It is the opinion of the best authorities that one Nurse for every three, or possibly four, patients is sufficient, and that a Staff limited to this number is best calculated to secure the maximum of efficiency and economy.

Duties of Nurses; Ward Discipline.

Temperature Charts should be kept, as a matter of routine, for all Patients under treatment in the Hospital. Day and Night Nurses' Reports are also essential. Proper books should be provided for these; it is desirable that both the Day and the Night Report of the patients in any Ward be kept in the same book.

The keeping of poisonous drugs under lock and key is, I find, a point which is not infrequently neglected. No doubt accidents or mishaps resulting from such neglect are not frequent, but when they do occur the consequences are often very serious. Patients' mixtures in use, liniments, etc., and antiseptic solutions, should be kept out of the Wards and out of the Patients' way, preferably in the Duty Room. Uncertificated Nurses should not, under any circumstances, be permitted to administer hypodermic injections, and before allowing even certificated Nurses to do so, care should be taken to make certain that they are thoroughly competent; in order to minimise the risk of any error in dosage, tabloid preparations of hypodermic remedies should be employed whenever possible.

Another point to which sufficient attention is not paid, in the case of many Hospitals, is the supervision of patients during meals; several instances in which carelessness in this respect has led to serious results have come to my knowledge. There is perhaps no time when Nurses are so much needed in the Wards as while the patients are having their meals; they should not be allowed to leave the Wards for the purpose of having their own meals until the patients have finished and until all food and eating utensils have been cleared away.

Training of Nurses.

In the majority of the Hospitals inspected, my experience has been that the attention devoted to the training and instruction of Probationers and Uncertificated Nurses and their preparation for examination is not so great as might reasonably be expected. Systematic instruction in cooking for the sick—a most important part of a Nurse's training—is, in particular, very generally neglected.

Hospital Boards appear, as a rule, to experience little difficulty in obtaining Probationers of a suitable class; the difficulty generally is in retaining them. It is a common practice for a Probationer to spend a few months in one Hospital, then leave and secure an appointment in another, so that during her three years' course of training, she "samples" perhaps half a dozen or more Institutions. Migratory habits of this nature not only prevent the development of *esprit de corps* amongst the members of the Nursing Staff of a Hospital, but they have a very detrimental effect on discipline and training. It is, I think, a matter for the consideration of the Colonial Medical Council whether, in the interests, not so much of Hospital Boards as of the Nursing Profession in general, a Regulation should not be put into force requiring Candidates for examination for the Council's Certificate to satisfy the Council that, say, at least two years of their curriculum have been passed at one and the same Hospital, the rule being, of course, relaxed under special circumstances, so that no hardship need result to Candidates who, through no fault of their own, are unable to comply with its requirements.

Accommodation for Cases of Infectious Disease.

A considerable proportion of the Hospitals inspected are without any proper facilities for the isolation of cases of Infectious Disease inadvertently admitted or developing subsequent to admission. Suitable accommodation of this nature is essential for all Hospitals. Isolation Rooms should be separate and preferably situated some distance away from the main Hospital buildings; they should be well lighted and ventilated, and be so constructed as to admit of easy disinfection. Each should have a small Nurses' Duty Room adjoining.

Disinfection of Infected Articles.

The arrangements for the efficient disinfection of clothing, bedding and other articles used for cases of Enteric Fever or other Infectious Disease require careful attention in the case of all Hospitals. At present very few Hospitals in the Colony have proper facilities of this nature. For Hospital purposes a Thresh Steam Disinfector is perhaps the most convenient and economical form of apparatus. For small Institutions the cost of such an apparatus* is, however, often prohibitive, but as every Local Authority in an urban area of any considerable size should possess or have the use of some such apparatus, the difficulty of expense could, in most cases, be overcome if the Local Authority arranged with the Hospital Management to jointly bear the expense of procuring and maintaining a suitable Disinfector.

When a Steam Disinfector is available, all articles of clothing, bedding, etc., which have been used for cases of Enteric Fever or other Infectious Disease should be passed through it before being returned to the Wards. When such an apparatus is not available, fluid disinfectants must be resorted to—disinfection by Sulphur Dioxide or other gaseous disinfectant should never be relied upon. Unfortunately, it would appear that the ideal fluid disinfectant for this purpose has yet to be discovered—Jeyes' Fluid, Santaline, Lysol and similar compounds darken linen and other white fabrics, whilst Perchloride of Mercury, even in alkaline solution, has an injurious effect upon fabrics, interfering with their wearing qualities, and, more especially in the case of woollen goods such as blankets, making them harder in texture. Carbolic Acid Solution has a tendency to discolour fabrics and, unless very carefully prepared, is apt to burn the hands. Formalin Solution does not discolour linen or white fabrics and its effect on texture is but slight. Whichever disinfectant solution be employed, all infected sheets, blankets, pillow slips and similar articles should be immersed in it before being sent to the wash; mattresses and pillows should be thoroughly sponged over with the same solution, any portions soiled with excreta being first thoroughly scrubbed and cleansed. In cases of Enteric Fever or other Infectious Diseases, care should be taken to disinfect the wearing apparel worn by the patient on admission and to ensure that that worn by him on discharge is free from infection; experience shews that this is a point which is sometimes overlooked.

Supply of Drugs, Surgical Dressings, etc.

The practice followed by some Hospitals of having prescriptions made up by, and procuring their supplies of Drugs, Surgical Dressings, etc., from, local Chemists is almost invariably a very expensive one. If at all practicable, supplies of these articles should

* This is about £170, landed in the Colony.

be imported direct from Europe. Where a special Dispenser is not employed and where it is impossible for the Medical Staff to do the dispensing work, it will usually be possible to arrange for the daily attendance of a qualified Dispenser at a small annual honorarium.

Records of Drugs, etc.

Duplicates of prescriptions made up and records of mixtures repeated should be kept in book form, and, at least in the case of the larger Hospitals, separate records should be kept of Drugs, Dressings, etc., supplied to In-patients and Out-patients respectively. To facilitate this differentiation it is desirable to keep a separate stock of the more commonly used drugs, and separate stocks of dressings, etc., for issue to Out-patients. Stock of all drugs, antiseptics, chemicals, etc., should be taken monthly where a whole-time Dispenser is employed, and in other cases at least quarterly. If a proper form of Register be used, such stock-taking entails very little trouble, and can, if necessary, be carried out by the Matron or a qualified Nurse. A suitable Register may be prepared by taking an ordinary well-bound foolscap book, writing the names of articles in alphabetical order down the left hand margin of each left hand page, and ruling off the double page as follows, the headings being entered in as required:—

..... HOSPITAL.

REGISTER OF DRUGS, ANTISEPTICS, CHEMICALS, ETC.

Names of Articles (In Alphabetical Order).	In Stock (Date).	Received.		Issued.		In Stock. (Date).	Received.		Issued.	
		From.....	To.....	From.....	To.....		From.....	To.....		
		To.....	To In- Patients.	To Out- Patients.	To.....		To In- Patients.	To Out- Patients.		
.....lbs.										
.....oz.										
.....doz.										
etc.										

With a Register of this nature and with monthly stock-takings, it will be necessary to re-write the names of the articles only about once in every two years. In small Institutions where the dispensing is done by one of the Visiting Medical Officers and where it is impossible to differentiate between issues to In-patients and those to Out-patients, the " Issued " column may be omitted ; the total quantities issued between stock-takings can readily be calculated from the figures in the other columns.

Records and Registers of Surgical Dressings, bandages, etc.

Registers on similar lines should also be kept for Dressings, bandages, etc., and for Surgical Instruments and Appliances. Surgical Dressings are a by no means unimportant item of Hospital expenditure, more especially in larger Hospitals where the ratio of surgical to medical work is usually greater than in smaller Institutions. In every case effective measures should be taken to ensure that due economy is constantly exercised, both as regards the quantities and the *kinds* of Dressings used. At least in the case of the larger Hospitals the Management should require the submission of Monthly Returns shewing the quantities of Dressings, etc., used, and their cost, for In-patients and Out-patients respectively. In large Hospitals such Returns should shew, for purposes of comparison, the quantities and cost of such issues to each Ward, the average number of surgical cases in each Ward during the month being shewn in a parallel column. With such a system, any want of economy in the use of Dressings will be at once apparent; it is a good plan to furnish copies of the Returns to each of the Surgeons concerned.

Records of Furniture and Equipment.

With two exceptions, in none of the Hospitals visited have I found that proper records of furniture, equipment, linen, etc., are kept—a state of matters which, in any Public Institution, cannot be regarded otherwise than as unsatisfactory. A proper " Register of Equipment " should in all cases be kept, stock being taken and the Register made up at least quarterly. As in the case of Drugs, such stock-taking entails very little clerical work if a suitable form of Register be employed. In the case of Institutions which have an Equipment Store and keep a stock of unissued equipment, one Regis-

ter should be kept for articles received into and issued from Store and another for articles in use, the latter being, of course, kept in sections, each Officer in charge of equipment keeping a Register of the equipment in his care. For instance, the Wards Sisters, if in charge of the equipment in the various Wards, should each keep separate Registers, and another should be kept by the Housekeeper or other Officer in charge of the kitchen. In all cases, separate Registers should be kept for equipment in the Nurses or Medical Officers' Quarters. In small Institutions where no such stock of unissued equipment is kept, one Register is all that is required, unless the different classes of equipment are under the care of different persons, in which case it will be convenient to have separate Registers. Suitable Registers for this purpose may be prepared by taking, as in the case of the Register of Drugs, an ordinary well-bound foolscap book and ruling it off as follows:—

.....HOSPITAL.
REGISTER OF EQUIPMENT.

Name of Article (In Alphabetical Order).	In Stock (Date).	Received From..... To.....	Condemned (Date).	Missing (Date).	In Stock (Date).	Received From..... To.....	Condemned (Date).	Missing (Date).

With this Form, in a foolscap book and with a monthly stock-taking, the names of articles will only require to be written once a year. If stock be taken only quarterly, the names will, of course, only require re-writing every three years, a larger sized Register lasting proportionately longer.

Condemnation of Articles unfit for use.

The system which is almost invariably in vogue in regard to the condemnation of articles unfit for further use or the writing off of missing articles is that this is done by either the Matron or Secretary. Such an arrangement is distinctly unsatisfactory; articles should only be written off as condemned or missing by Official Visitors, members of the House Committee or other persons duly appointed thereto by the Management, not being persons ordinarily in charge of the equipment. Articles unfit for further use, or missing articles, should be written off by due authority at each stock-taking. Articles unfit for the purpose for which they were originally intended, but capable of being utilised for some other materially useful purpose, should be entered as "Condemned" under the original heading and as "transferred" in the "Received" column under the new heading. Thus a Bed-sheet with one corner torn off or damaged, but otherwise in good order, may be converted into a Cot-sheet: it should be entered as "Condemned" under the heading "Sheets: Bed" and as "Received (transferred from 'Sheets: Bed')" under the heading "Sheets: Cot." A sheet unfit for further service, except for making bandages, should merely be entered as "condemned."

Supply of Provisions and Systems of Dieting.

In all except one of the Hospitals inspected the system of supplying provisions calls for more or less complete re-organisation. Three systems of dieting patients are in use, namely:—(a) What may be termed the "domestic" system, in which the Matron or Officer ordering supplies requisitions for what it is thought will be necessary; (b) a system of Diet Scales "taken as a guide"; and (c) a system of fixed and enforced Diet Scales from which the requisitions for supplies are calculated. Except in the case of the Somerset Hospital, in which the dieted Officers and employes receive a certain fixed daily allowance in lieu of diets, there is not in any of the Hospitals inspected any proper system of dieting the Staff, or any official and duly authorised Diet Scales for the dieted Officers and employes.

The "Domestic" System.

In this system, the responsible officer, usually the Matron or Housekeeper, orders what she thinks will be sufficient; if any be left over it may be preserved and utilised for the following day. The advantages claimed for this system are that no clerical work is involved, except in writing out the Orders—even this is not done in some cases, the orders being given verbally or by telephone—and that it is possible to freely vary the

diet. The latter is not so important a consideration as might at first sight appear. In General Hospitals, the average stay of patients is usually under a month, and during this time each patient will usually have run the gamut of Diets, beginning with the "Admission" or "Milk" diet and ending on "Full" diet. Thus, a patient is rarely on one diet for more than two or three weeks at a time. The dieted Staff are, however, on a somewhat different footing, and in their case it is desirable to provide for a more varied dietary. The great defect of this system is that the entire responsibility for preventing excessive expenditure rests, practically speaking, with the Housekeeper. If she be a capable and economical manager, she may succeed—by varying the orders according to the price of the various articles of supplies, rigidly enforcing economy, and utilising all food left over after meals—in cutting down expenditure, as is done by many a good housewife, to the lowest amount possible, consistent with the proper dieting of the persons to be supplied. But the incentives to economy which exist in the case of a housewife managing the commissariat of her own family do not exist in the case of the Matron or Housekeeper of a Public Hospital. No doubt some such Officers do achieve considerable success with this system in the direction of economy, but success or failure depends almost entirely on the personal equation—an element which it is one of the fundamental principles of sound Institutional administration to as far as possible eliminate. Moreover, if economy be exercised, the Management can only appreciate it in a vague and general way from the monthly amounts of the Hospital accounts, considered with the kind of information usually furnished as to the number of patients in Hospital during the month. Under such circumstances it is quite impossible for them to form any definite and precise opinion on the point, but even if the expenditure for one month be so obviously excessive as to attract attention, the detection and location of the particular direction in which waste, extravagance, or perhaps irregularity has occurred is almost invariably difficult and may even be impossible. Another serious objection to the "domestic" system of supplies is that no precise line can be drawn between *diets* and "*Extras*."

The System of Diet Scales "taken as a guide."

The second system, or that in which Diet Scales of some kind are in use, but which are merely taken as a guide, exists in the majority of the Institutions which I have inspected. In most cases, such Scales are drawn up in such a way as to be adapted for the purposes of the Cook rather than for those of the Officer requisitioning for supplies, so that they are of little use to the latter in making out orders, and practically valueless for checking purposes. In the majority of the Institutions the Scales were to a great extent disregarded, both as regards the ordering of supplies and the feeding of patients. The system possesses all the disadvantages of what I have termed the "domestic" system, over which, from the administrative point of view, it possesses no advantage.

The Standard Diet Scale System.

13. It is absolutely essential for the proper and economical administration of any Hospital or kindred Institution that there should exist and be in force a system whereby supplies to persons dieted at the expense of the Institution are procured and issued according to a fixed scale, proper records of all such orders and issues being kept, and periodical, preferably monthly, Abstracts of Supplies made out. Such Abstracts should shew the number of diets of each class issued daily, the total daily issues of each article, the total issues during the month, the quantities in stock at the beginning of the month, the total quantities received during the month and the quantities remaining in stock at the end of the month. From such Abstracts, based on a system of Standard Diet Scales for all persons dieted at the expense of the Institution, it is possible to see at once whether economy is being exercised or the reverse, and the precise degree of economy or excessive expenditure, as the case may be, in the case of each article supplied; the personal equation is largely eliminated, and any waste, extravagance or irregularity may be readily detected and located. In addition to these considerations, the mere keeping of such records is calculated not only to prevent carelessness in an unsatisfactory Officer but to promote greater economy in an efficient one.

Objections to Standard System.

Two objections may be raised to this system, namely, that it hampers the varying of diets, and that it entails extra clerical work. The first objection I have already dealt with so far as patients are concerned; the dieting of the Staff under this system, which is considered in a succeeding section, presents no difficulty.

With regard to the extra clerical work entailed, this objection is of comparatively little consequence in a large Institution employing a special Clerical Staff. It is not necessary for me to here enter into the practical details of the working of the system in the case of such Institutions; they cannot do better than adopt the excellent system of Supply Books and Records in use at the Somerset Hospital, Cape Town, and detailed in my Report on that Institution. But, with a small Hospital having no special Clerical Staff and where any extra clerical work would fall on the Matron or Housekeeper, the case is different, and it is necessary to reduce such work to a minimum, consistently with the carrying into effect of the essential features of the system. In the system hereinafter detailed, I have endeavoured to effect this; the amount of extra clerical work which it entails is slight, and may be carried out by any person with a fair education and average intelligence. I have, on several occasions, been informed by Matrons and Housekeepers that they "have no head for figures" or that they "simply detest clerical work." I may say at once that it is absolutely necessary that any person charged with administrative duties of this nature should be able to keep proper records of supplies, etc., and possess sufficient business qualifications to carry out a system of the nature here indicated. This is, I fear, a point to which sufficient attention is not always paid in selecting Matrons or Housekeepers. Every Hospital Matron or Housekeeper should be able to make the necessary calculations and keep the necessary records of the "Standard" system, or—to state the same opinion in a different way—any such officer, if unable to do so, is not a fit and proper person to have charge of the commissariat arrangements of any Government or State-Aided Institution.

Details of the Standard System.

The basis of this system is the Table of Diet Scales, which should contain a Scale for each class of person to be dieted at the expense of the Hospital; thus, in the case of Patients, there are usually four classes of diet, *e.g.*, "Milk," "Liquid," "Medium," and "Full," there being also, as a rule, special diets for Natives. With regard to Staff, there will be Scales for the Nurses and Medical Officers and for the subordinate European employés and Native or Coloured employés respectively. Each Scale should shew the total daily quantities to be ordered from the Contractor for each person dieted. If desired, a separate Scale for the use of the Cook, based on the Standard Scale but shewing the constituents of each meal and the quantities of *cooked* materials to be supplied to patients and others, may be prepared. All diets for patients should be ordered by a Medical Officer in writing on the patient's bed-card. In the case of small Hospitals, a "Daily Roll of Diets" may be kept, shewing the patients' names and the diet prescribed, each sheet being ruled so as to provide columns for entering the diets for a period of one month, but such records are not an essential part of the system. The different classes of diets may conveniently be designated by letters; thus, patients' diets may be designated by the letters "A" to "F," and Staff diets by "X" "Y" and "Z." The Officer making out requisitions for provisions should first ascertain the numbers of each kind of diet required; these numbers should then be multiplied into the corresponding Diet Scale, the totals added up, the amounts entered in the Diet Register, and the orders to the various Contractors made out in accordance therewith. This, at first sight, may appear a somewhat intricate calculation, but, as a matter of fact, some such calculation is necessary even when Diet Scales are either not in use or are merely taken as a guide. To a person of ordinary intelligence the procedure will, after a little practice, present no difficulty, and will usually be found much easier than making out the orders by mere guesswork. In Institutions with several large wards, the nurse in charge of each ward should furnish to the Matron or other Officer requisitioning, by a certain hour daily, a slip shewing the number and kinds of diets required for the patients under her charge. In distributing the diets, the scales should be taken as a guide; it may, however, be desirable to weigh or measure out, in bulk, the respective quantities required for the Staff, and the supplies of bread, milk, etc., for the various wards, but it is unnecessary to weigh or measure out quantities for individual patients—their rations may be allocated much as in the "domestic" system.

If the scales be suitable, there should be sufficient for all and nothing left over. If, however, it be found, after sufficient trial, that this is not the case, the Diet Scales should be altered in the required direction, by the proper Authority.

All orders for supplies should be made out in proper Order Books, either of the counterfoil or duplicating type, with numbered pages. Contractors should, in all cases, be required to furnish Delivery Notes with supplies, the Notes to be signed, if correct, by the Officer receiving and checking the supplies, and to be attached to the Contractor's Account when rendered.

Monthly Abstracts of Diets.

The "Monthly Abstract of Diets" should, as already stated, shew the number of each of the various kinds of diets issued to both patients and Staff during each day of the month, the total issues during the month (the quantities issuable according to Scale during the month being shewn in a parallel column for purposes of easy comparison), the quantities in stock at the beginning and end of the month respectively, and the quantities received during the month, the Return being signed by the Officer responsible and submitted to the House Committee or Board at its next meeting. The following Form has been drawn up with a view to meet the requirements of Institutions not employing a special Clerical Staff. It will be noticed that it contains a column for "Kitchen Sundries and Special Issues," the latter being intended to include issues made to patients admitted after the orders for the day's supplies have been sent out. The Forms should be bound in books containing, say, two hundred pages, each monthly statement occupying one double page.

.....HOSPITAL.

REGISTER OF DIETS ISSUED DURING THE MONTH OF.....19...

Date.	No. of Patients Diets Issued.						No. of Staff Diets Issued.			Meat.	Bread.	Milk.	Oatmeal.	Potatoes.	Vegetables.	Butter.	Tea.	Coffee.	Sugar.	Rice.	*	*	*	*	*
	A	B	C	D	E	F	X	Y	Z																
1										lbs.	lbs.	Pts.	lbs.	lbs.	lbs.	oz.	oz.	oz.	oz.	lbs.					
2																									
2																									
4																									
5																									
ete. to																									
31																									
Total Scale issues.																									
Kitchen Sundries and Special Issues during the Month.																									
In Stock at beginning of Month.																									
Received during the Month.																									
Total																									
Total Issues during the Month																									
Quantities Issuable as per Scale during the Month.																									
In Stock at end of Month																									

Date.....19...

Signed.....

Seeretary or Matron.

Patients' "Extras."

In many Hospitals, the term "Extra" is regarded as meaning only stimulants. This is misleading--the term should be regarded as covering all articles of food or drink not provided for each person dieted under the Diet Scale authorised for such person. Orders for "Extras" to patients should invariably be in writing by a Medical Officer on the bed-card and, unless repeated, should remain in force for not more than one week, i.e., all orders for "Extras" should be regarded as eancelled unless repeated, say, on the Saturday of each week. Unless some provision of this nature exists, "Extras" will, in a certain percentage of cases, and even when every vigilance is exercised, continue to be issued to patients after they have ceased to be necessary. A "Daily Roll of Extras," shewing the names of patients drawing "Extras" and the amount supplied to each should be kept; an ordinary foolscap note-book will usually be found suitable for the purpose. A

(* Columns and headings should exist for all arteeles specified in the Diet Scales for Patients and Staff.)

“Register of Extras” should also be kept for submission to the House Committee or Board of Management, framed on the same lines as the Register of Diets already described. The following Form is suggested:—

.....HOSPITAL.

REGISTER OF “EXTRAS” ISSUED DURING THE MONTH OF.....190...

Date.	Stimulants.							Mineral Waters.		Milk (Pints.)	Eggs.	Chickens.	*	*	*						
	Brandy (French)	Brandy (Cape).	Whisky.	Port Wine.	Pontac.	Ale.	Stout.	Soda (Bottles).	Lemonade (Bottles).												
	Oz.	Oz.	Oz.	Oz.	Oz.	Pts.	Pts.														
1																					
2																					
4																					
5																					
etc. to																					
31																					
Issued to Staff during Month																					
In Stock at beginning of Month																					
Received during Month																					
Total																					
Total Issues during Month																					
In Stock at end of Month																					

Date.....

.....
Secretary, or Matron.

Expenditure on “Extras.”

In all Hospitals, expenditure on “Extras” to patients is considerable, and the larger the Institution the greater, as a rule, is the ratio which it bears to the expenditure on diets. Visiting Medical Officers, especially in large Hospitals, have a tendency to order “Extras” with a lavish hand. In one of the largest Hospitals inspected by me, the expenditure on “Extras” was something enormous, being at an average rate of nearly 6½d. per patient per day. In not a few instances the Medical Officers of this Institution appeared not to be fully aware of the constituents of the standard diet ordered for the patient; for instance, custard was not infrequently ordered as an “Extra” to patients on a “Spoon” Diet, which itself contained pudding, composed either of custard, sago or tapioca. In not a few instances chicken tea was ordered for patients on a Milk Diet consisting of milk and beef-tea. In some cases the quantities of “Extras” ordered were so great that it would be impossible for the patient to consume both his “Extras” and the supplies provided under Scale, so that considerable waste must have in this way resulted.

In practice, it will frequently be found that in individual cases where excessive “Extras” appear to have been ordered, but little can be proved in the face of assertions by the Medical Officer attending the case that “Extras” were necessary. The only effective means of controlling expenditure on “Extras” is by a system of monthly returns of such expenditure, arranged so as to render it possible to compare the expenditure with that of previous months, or, in the case of large Hospitals, to compare the expenditure in the various wards during the same month.

In the case of the latter, the Monthly Returns should shew the names of the Medical Officers in charge of the wards, the average number and the race of patients in each ward during the month, the quantities of “Extras” issued to each ward, and the average ex-

(* Columns and headings should exist for all commonly used “Extras”; a few blank columns should be left without headings to be filled in as required for those more rarely used.)

penditure on "Extras" per patient in each during the month. Copies of this Return, after consideration by the House Committee or Board of Management, should be furnished to the Medical Officers concerned, any apparent extravagance being at the same time specially brought to the notice of the Officer responsible.

Dieting of the Staff.

With regard to the general question of the dieting of the Staff, the expenditure on maintenance of Staff should be, whenever practicable, differentiated from that on patients. Where cooking for the Staff is carried out in a separate kitchen or where other arrangements exist for keeping Staff supplies separate, the records of supplies for patients and Staff respectively should be kept entirely distinct. In such cases, the question of adopting the system of making a fixed daily allowance in cash in lieu of rations should be considered. It possesses many advantages, and at the Somerset Hospital, where each member of the Staff receives an allowance of 1s. 6d. per day, appears to work very satisfactorily. As, however, it entails a considerable amount of Clerical work, it is only practicable in the case of Institutions where a special Clerical Staff is employed. The system of making an allowance of "Routine Extras" to members of the Nursing Staff is unsatisfactory for several reasons. The preferable plan is to make a fixed monthly cash allowance to the Nurses' Housekeeper or the Matron, to be expended at her discretion on "Extras" for the Nursing Staff, periodical Returns of the "Extras" purchased being furnished to the House Committee or Board of Management.

Hospital Accounts.

The system of keeping accounts in the various Hospitals which I have inspected, appears to me to be capable of considerable improvement; it is also, I think, greatly to be desired that a uniform system should be adopted in all Government and State-Aided Institutions of this nature. The Annual Financial Statements have hitherto been framed on the basis of the Annual Financial Return required to be furnished by Hospitals to Government for incorporation in the Statistical Register. This Return, while it may be suitable for the purposes of the Statistical Register, is not adapted for enabling a clear opinion to be formed as to the manner in which any given Institution is being administered. A Hospital Financial Return should, if at all practicable, shew, separately, expenditure on maintenance of patients, on maintenance of Staff, and on Out-patients, none of which are so shewn on the present Official Return. The Return at present in use also groups the items under "Receipts" and "Payments," terms which are in some cases interpreted to mean "Revenue" and "Expenditure incurred," and in others, amounts actually received or paid during the year whether in respect of the working of the Institution during the year or during the previous or succeeding years. Comparisons between the Returns rendered by different Institutions, or even by the same Institution for different years, are therefore, apt to be, and as a matter of fact frequently are, more or less misleading. I am aware that in the case of Hospitals where no special Clerical Staff is employed and where the cooking for both patients and Staff is done in one and the same kitchen, the separation of expenditure on Staff and patients is a matter of some difficulty, and may even, in some cases, be impossible, but even in such cases the separation should as far as possible be effected. In the case of Institutions with separate supply systems for patients and Staff, and with a special Clerical Staff, the complete separation of these items should in all cases be insisted upon. I attach hereto (Annexure "B") a draft Form of "Annual Income and Expenditure Account" suitable for use by State-Aided Hospitals and kindred Institutions, and would recommend that all such Hospitals and Institutions be required to furnish to Government Annual Returns of Income and Expenditure on a Form of this nature, with, of course, any amendments which the Departmental Accounting Officer may see fit to make. This latter remark also applies to the other Financial Account or Return Forms submitted with this Report.

Uniform System of Classifying Items of Expenditure and of Cash Accounts.

In order that all Hospital Accounts and Returns may be in all respects comparable it is essential that a uniform system of allocating items of Revenue and Expenditure under the various heads be followed; it is also greatly to be desired that the Cash and other Money Accounts be kept on uniform lines. An "Index of Classification" of items of Expenditure, drawn up in London by a Committee of Hospital Secretaries, has been published by Burdett, in his "Uniform System of Accounts for Hospitals" (The Scientific Press, Limited, London), together with a series of Draft Account Forms. This Index of Classification appears in every way suited for the purposes of Colonial Hospitals. The Account Forms are convenient and suitable in their main lines but appear to require modification in certain respects so as to suit the conditions prevailing here; this matter is, however, one for the attention of the Accounting Officer of the Department.

Annual Estimates; Disposal of Receipts; Auditors.

In Hospitals or similar Institutions of any considerable size the procedure of framing and considering Annual Estimates of Revenue and Expenditure is greatly to be commended, being calculated to promote sound administration and economy. All receipts, from whatever source, should be paid into the Revenue Account at the Bank; the practice of allowing any Officer of an Institution to utilise, for the purposes of petty expenditure or otherwise, receipts which have not previously been so paid in violates the first principles of Institutional Administration. In all Institutions it is necessary to empower some Officer to make petty disbursements, for which purpose a certain amount of petty cash is necessary. The most convenient plan is to give the Secretary, Matron, or Housekeeper, as the case may be, a cheque for a round sum sufficient to cover petty disbursements during the month, and at the end of each subsequent month to draw a cheque in his or her favour for an amount which, with the balance of petty cash on hand, will make the amount equal the original amount; thus, if petty disbursements amount to upwards of £10 a month, a cheque in favour of the Secretary, Matron or Housekeeper, as the case may be, should be drawn for that amount, and if at the end of the month, an amount of, say, £2 10s. remains on hand, the cheque for the succeeding month should be for £7 10s. All cheques should be signed by the Secretary and countersigned by the Chairman.

All Official Financial Statements of Institutions should be signed and certified as correct by duly appointed Auditors. The "combined" system of Audit, in which one of the Auditors is a Professional Accountant and the other an active member of the Management, is much to be preferred.

Annual Returns of Patients.

The remaining portions of the Annual Returns at present required to be furnished to Government by Hospitals, with the exception of the Return of Diseases and Deaths, appear to me to call for revision in several respects. The "Admissions and Discharges" merely classify patients into "Males" and "Females," whereas the Race of patients is, from the administrative point of view, much more important. In some respects, the Returns appear to be unnecessarily detailed, whilst in others the information asked for is insufficient.

I attach hereto (Annexure "C"), a draft Form of "Annual Return of Patients Treated," which might, I think, be adopted with advantage by all Government and State-Aided Hospitals. I also attach (Annexure "D"), an Annual Return Form to shew the average cost per patient, with headings to correspond with the principal headings in the Form of "Annual Income and Expenditure Account" (Annexure "B").

Other Annual Returns.

I would also recommend that the following Annual Returns be made to Government and issued to Subscribers with the Annual Reports by the Boards of Management of all State-Aided Hospitals and kindred Institutions:—

- (a) A Return of the average Staff employed during the year, showing, in the case of each member, whether dieted or not. I attach a suitable draft Form of Return (Annexure "E").
- (b) An Account of Patients' Hospital Fees. Draft Return Form attached (Annexure "F").
- (c) A Balance Sheet showing the financial position of the Institution at the end of the year. From this Balance Sheet, Hospital buildings, furniture and other property exclusively used for the purposes of the Hospital, and not realisable, in the ordinary sense, to meet liabilities, may be omitted. This will obviate an objection which I have heard raised to the publication of Balance Sheets, namely, that to show a large credit balance, even when it is composed largely or entirely of valuations of land, buildings and other property used solely for Hospital purposes, is calculated to adversely affect subscriptions.

I attach (Annexure "G"), a Form of Balance Sheet which has been drawn up to meet the special requirements of State-Aided Hospitals and kindred Institutions.

- (d) A Return of Attendances of Members at Meetings of the Board of Management or Committees, or as Official Visitors.

The desirability of Annual Returns of the nature above indicated being furnished to Government and Subscribers is, I think, so obvious as to require no advocacy from me. At present, so far as I am aware, no Hospital Board in the Colony publishes with its Annual Report a statement showing the number of persons other than patients boarded at the expense of the Institution; no such Board publishes a statement showing the particulars indicated in the Account of Patients' Hospital Fees, and in the case of only a few such Institutions is an Annual Balance Sheet or a Return of Attendances of Members, published.

HOSPITAL CONSTRUCTION IN THE COLONY.

General Considerations.

Owing to climatic and other conditions, the considerations governing Hospital construction in this country differ materially from those obtaining in Europe, so that it may not be out of place for me to here briefly refer to some of the more important points which should be borne in mind in connection with new schemes of Hospital construction or the carrying out of alterations to existing Hospitals, and, more especially, to considerations which have a special significance in this country as compared with Europe, or are apt to be overlooked or insufficiently attended to. Some of the following recommendations may partake of the nature of "counsels of perfection"; I fully recognise that, owing to financial and other considerations, it will not infrequently be found impossible to carry them out in their entirety, but even in such cases, it is always useful to have a clearly-defined ideal at which to aim.

In this country the general population leads a much more out-door life than is the case in Europe, and the climate is much better suited for the freer open-air treatment of disease, so that it is greatly to be desired that Hospitals should have ample and easily-accessible verandah accommodation, together with sufficiently extensive grounds provided with shelters and other conveniences for convalescent patients. The problem of nursing and internal administration also differs markedly from that in Europe. There General Hospital patients fall, as a rule, within one of four classes—Male and Female, each subdivided into Medical and Surgical. Here, owing to the necessity of keeping Europeans separate from Coloured and Native patients, we have eight primary classes, with an additional class in most Hospitals for private paying patients, the accommodation for the latter, however, being generally of such a nature as to be suitable for either Medical or Surgical cases in either sex. If it be desired to provide special accommodation for children and to treat cases of Venereal Disease, the problem becomes still more complex. In the smaller Hospitals it will usually be impossible to completely separate Surgical from Medical cases, but there can be no question that this should be done whenever possible or practicable. When the complete separation of these two classes is impracticable, separate accommodation should be provided for special Surgical cases such as cases of Abdominal Section or other major operation; such accommodation may, when not required for special Surgical cases, be used for other cases of a non-infectious and non-septic nature.

When considering the question of the accommodation required and its arrangement in any proposed new Hospital, the first step should be to procure reliable information as to the number of beds likely to be required and the probable relative proportion of each Race and Sex—the question of the separation of Surgical from Medical cases must usually depend, to a large extent, upon financial considerations. It is clear that sufficient attention has not always been paid in the past to these points—in several Hospitals which I could mention the same amount of accommodation has been provided for each of the two sexes, although the average number of males treated is two or three times that of females. Inconvenience of administration and loss of space must inevitably result from such an arrangement.

Sites for Hospitals.

If at all possible, a site for a General Hospital should be at least several hundred yards distant from densely populated parts of the town, and such that the immediate vicinity is not likely to become populated. It should be sheltered from the prevailing rainy winds of the District, should be elevated, though not excessively so, and the ground should have a gentle slope, preferably away from the front of the Hospital. Steep declivities either necessitate the placing of the different buildings upon different levels or else entail heavy expenditure for foundations and excavations. The vicinity of brickworks, lime kilns or premises where offensive trades are carried on, should be avoided. Attention should be paid to facilities for water supply and drainage and the suitability of the ground for the growth of trees and shrubs. The site can scarcely be too extensive; 1,000 square feet per bed may, however, be taken as a working minimum.

General Arrangement of Buildings.

As regards general arrangement, Wards should be arranged so as to admit of free cross ventilation and of each bed having direct light—desiderata which are, as a rule, best secured by the adoption of the "pavilion" system. The space between adjoining pavilions should be at least equal to three-quarters of their combined heights. As a general rule, owing to the greater number of classes of patients, Wards should be smaller in this country than in Hospitals of a similar size in Europe. In the case of small Hospitals, it will usually be found convenient to arrange the accommodation in the form of a central block with two wings, the former containing the Office, Operating Room, and Private Patients' Rooms, and having the kitchen, sculleries, Hospital Stores, etc., at the

back. European General Ward Patients of both sexes should be accommodated in one wing, Coloured and Native patients of both sexes in the other, due regard being paid in the arrangement of the wards and of the doors and windows so as to secure the proper separation and privacy of the sexes. In the arrangements of the wards and of verandahs or balconies, attention should be paid to the admission of sunlight and to prevailing winds. As a general rule, one side of a ward should, if possible, have a northerly or north-easterly aspect.

Structure and internal arrangement of buildings.

A roofed porch at the main entrance under which vehicles or ambulances can drive or stand is desirable, especially in localities where heavy rains are not infrequent. Steps at the main entrance should be as few as possible and have an easy gradient. The areas under the floors should be concreted or asphalted and the under-floor spaces freely ventilated, the ventilation and other openings being protected so as to prevent the ingress of rats or mice. All floors should, if possible, be on the same level; when this is impracticable and where it may be necessary to move patients on wheeled ambulances or beds, the different levels should be joined by easy gradients.

Walls should be solidly constructed of good stone or hard burnt brick, laid in lime or cement mortar; they should have a good damp-proof course laid below the level of the ground-floor joists. All internal or partition walls should be carried up to the roof so as to prevent noises in one Ward being heard in another. The entrance door should be of the double pattern and of good width; the entrance hall and corridors to Wards should be at least six feet in width; main corridors should, if possible, have French windows or double doors opening on to the outer air at each end, each window or door being surmounted by a large fanlight. Staircases should be wide and have an easy gradient.

Size, Lighting, Ventilation and General Structure of Wards.

Wards should have an internal breadth of at least 22 feet and preferably of 24 feet; the floor space per patient should if possible be 120 square feet, and in any case not less than 100 square feet, and the cubic capacity not less than 1,500 cubic feet, and preferably 2,000 cubic feet, per patient. The beds in a Ward should be arranged in two rows and between each bed and the next there should be a window; each bed should have at least eight feet of clear wall space so as to allow of a distance of five feet between adjoining beds and of at least four feet six inches between adjoining windows. The windows and doors should be arranged so as not to waste wall space at the corners or elsewhere.

The glass line of windows should be sufficiently low to permit of patients seeing out whilst in a sitting posture in bed or on an easy chair—about two feet six inches above the floor level will usually be found suitable. Except where hinged windows are necessary in order to facilitate cleansing, the ordinary double-hung sash is the most suitable; the lower sash should be furnished with a deep bottom rail and on the sill should be fixed a deep board instead of the usual shallow bead. The lower sash can by this means be opened and a current of air with an upward tendency admitted between the upper and lower sashes without any direct draught at the sill level. Each window should be surmounted by a fanlight, hinged at the bottom, otherwise known as a “hopper” light, measuring at least 12 inches above the window transome, and made to fall inwards to an angle of 60 degrees, the sides being protected with cheeks to prevent down draughts, the upper part of the hopper light should be as close to the ceiling as possible. The corners of Wards should be rounded; all projections or ledges should be avoided, and the ceilings, mouldings, cornices, etc., so designed as to afford no lodgment for dust. Wards walls should have a piece of timber let in about five feet above the floor level so as to facilitate the insertion of pegs for bed-boards, etc. Ceilings should be at least twelve feet, and preferably fourteen feet, high, and the walls finished with washable oil paint or other material with a smooth and washable surface.

Careful attention should be paid to automatic ventilation. The most satisfactory system would appear to be a series of ventilating gratings, each measuring about twelve inches by nine inches, placed in the wall at the head of each bed about six or eight inches above the floor level, with two or more large outlet gratings in the ceilings communicating with Boyle's or other suitable form of fixed ventilators on the roof ridges. Revolving cowls are frequently noisy and are consequently inadmissible. If possible, the spaces above the ceilings should also be freely ventilated by means of louvred openings in the gables. Another good form of roof ventilation is by means of “riding ridges.” If this plan be adopted, care must be taken to avoid down draughts. Floors of Wards should, if possible, be of pine, ash, or other hard wood; deal is unsuitable and not only does not wear well, but wears irregularly owing to the knots in the wood. The flooring boards should be of at least one-and-a-half-inch stuff, tongued and grooved. The floor should be very carefully laid; a creaking floor in a Hospital is intolerable. So far as my observation goes, the most satisfactory finish for Hospital floors is polishing with turpentine and beeswax.

Nurses' Duty Rooms.

A Nurses' Duty Room should be provided for each Ward, and should, if possible, be situated at the corridor or entrance end of the Ward. It may be provided with an inspection opening overlooking the Ward, although the practical utility of this is questionable. It should contain a water-tap and sink, with draining ledge, a linen cupboard, a cupboard for Ward medicines and dressings, a small locking cupboard for emergency drugs; shelves for antiseptic solutions and for Ward feeding utensils, cutlery, etc. Facilities for Ward cooking, such as warming of beef-tea, etc., should be provided in the form of a small gas stove, or, if there be no gas supply, a small paraffine stove, care being taken to ensure that all wood-work is properly protected from fire.

Sanitary Accommodation.

The sanitary and closet accommodation in connection with Wards should be on the "turret" or "annex" principle, the interior of the turret or annex being cut off from direct atmospheric connection with the Ward. This consideration, important as it is in the case of Hospitals which have a water carriage system for sewage, is much more important in the case of Institutions with a conservancy system of pail closets, as is the case in the great majority of Hospitals in the Colony. The turret or annex should be connected with the Ward by a short passage with a door on one side and a window in the other, both capable of being fixed in the half-open position, and each being surmounted by a large ventilating grating or louvred opening so as to constantly maintain free automatic cross-ventilation. Each turret or annex should contain a closet, bathroom and lavatory, and a slop closet containing a sink with flushing apparatus, a draining ledge and shelves for Ward utensils. Each should have a floor composed of cement or other hard, impermeable and easily cleansed material and should be well lighted and ventilated. In the case of pail closets, the part of the floor of the closet in front of the seat should have a slope towards the door of one in twelve, and the part under the seat a similar inclination towards a small door at the back for the removal of pails. If, however, the turret or annex be exposed to public view, the door for the removal of pails may be dispensed with and pails removed through the door in the passage. Proper arrangements should, in all cases, be made for retaining the pail in position under the seat. In the case of water closets, care should be taken to select basins of the "short hopper" pattern, with efficiently acting flushing arrangements. Owing to the free use of antiseptics in connection with night-soil pails and Ward utensils, earth closets or sanitary systems dependent upon bacterial action are, as a rule, unsuitable for Hospital purposes.

Verandah or Balcony Accommodation.

Every Hospital Ward in this country should be provided with good verandah or balcony accommodation. Verandahs or balconies should be at least six, and preferably eight or nine, feet broad and, if possible, so placed as to be sunny and not exposed to cold winds. They should be easily accessible from the Wards; each Ward should have a large French window opening on to the balcony or verandah so as to admit of the easy moving of bedridden patients into the open air. Balcony or verandah roofs should join the Ward walls at the level of the window transomes and *below* the hopper lights.

Circular Wards.

Before leaving the subject of Wards, it may be remarked that circular Wards have been built in connection with a considerable number of Hospitals in England and on the Continent of Europe, and, when properly designed and constructed, they have been found satisfactory in all respects. In Europe the great objection to this type of Ward has hitherto been the extra cost of the roof. In view of the cost of roofing materials in this country and the adaptability of that most commonly used—corrugated iron—to the circular form of building, I am unable to say whether this objection exists or has the same force here. So far as I am aware, no circular Ward has, as yet, been built in this Colony, but under special circumstances, as where the available area is limited, or its configuration unsuitable for a Ward of the ordinary rectangular form, its adoption might prove advantageous.

Operating Rooms.

The Operating Room should, if possible, have a southerly aspect so as to avoid the entrance of direct sun-light. It is desirable that it be cut off from atmospheric connection with the Wards by means of a passage with free cross-ventilation. It should be situated so as to be convenient and easily accessible for all Wards. Great attention should be paid to lighting—if possible, it should be lighted with large windows on three sides, and should also have a good roof-light immediately over the operating table. The

floor should be composed of some smooth, hard, and easily cleansed material; the best Operating Room floor I have seen is composed of white marble chips, laid in a kind of transparent cement and polished so as to have a perfectly smooth and glassy surface; this floor is known technically as "Marble Terrazzo." The corners of the Operating Room should be rounded and the walls should have a perfectly smooth and easily cleansed surface up to a height of at least eight feet, and preferably throughout, the plan usually adopted being to line the inside with porcelain tiles; all ledges and projections should be avoided. The Room should contain no unnecessary furniture; all its contents should, as far as practicable, be of the "aseptic" pattern. One or more lavatory basins and a good supply of hot water are essentials. In larger Hospitals an Anæsthesising Room should be provided in connection with the Operating Room.

Kitchen and Scullery Accommodation.

The Hospital kitchen should be conveniently placed, but yet so as to prevent the contamination of the air in the Wards or rooms. In order to prevent effluvia from reaching the Wards, the kitchen should be cut off from direct atmospheric connection with the general Hospital buildings, preferably by means of a covered way open at the sides, it should have adequate scullery accommodation adjoining. The floor of the kitchen and sculleries should be of cement or other similar material. A new type of stove—Adam's Patent—in which the cooking is done by steam, but with a chamber for puddings, roasts, etc., has recently been introduced. The initial cost of these stoves is not excessive, and the amount of fuel required is very much less than that for a stove of the ordinary type. So far as present experience shews, they appear to be well adapted for Hospital purposes.

Supply of Hot Water.

The provision of an ample supply of hot water is absolutely essential for all Hospitals. This can, as a rule, be conveniently and economically effected by having a kitchen stove with a super-heating attachment of sufficient size communicating with pipes laid on to the Operating Room, bathrooms, etc. The importance of providing a good supply of hot water does not appear to be properly appreciated, many of the Hospitals which I have inspected being without any adequate arrangements for the purpose.

Hospital Morgues.

A proper Morgue is an essential adjunct to all Hospitals. The Morgue should be isolated from the other buildings, out of the way of observation, and yet easily accessible for the bringing in and removal of bodies without offence to the public or to inmates. It should be properly drained and well lighted and ventilated, the windows and ventilating openings being placed so as not to contaminate the air of the Wards or other buildings in the vicinity. In the case of larger Institutions, the Morgue should consist of two compartments, one for the performance of *post-mortem* examinations and the other for the keeping of bodies awaiting interment; a small chapel is also desirable. In the case of small Institutions, the requirements may be met by one room, measuring say, ten by fifteen or twenty feet, with ledges or shelves at one end for keeping bodies awaiting burial. The walls should be of good materials and solidly constructed; they should be finished internally with some material such as tiles or enamel, up to a height of at least six feet; the floor should be composed of cement or other similar material, sloped and channelled so as not to allow of collections of fluid. The outlet pipe or channel gutter should either open into a properly trapped sewer-drain or over a pail or other suitable receptacle placed in a cemented and covered pit at the rear of the building. The windows should be placed so that direct sunlight cannot fall upon the *post-mortem* table or on the shelves for bodies, and should be fitted with obscured glass in the lower half. The room should be freely ventilated by louvred openings or by "riding ridges." The *post-mortem* table should be of porcelain or slate, sloped and channelled so as to convey away all blood and other fluids. In one corner of the room there should be a sink, preferably of porcelain, with a draining ledge and a water tap with a good head of water so as to facilitate the washing and examination of organs.

Nurses' Quarters.

With regard to Nurses' Quarters, I need only point out that they should be detached and at some distance from the Hospital, with which they may be connected by a covered way; this should be either entirely open at the sides or freely cross-ventilated. It is most essential that Night-Nurses' bedrooms should be arranged so that the occupants' sleep during the day will not be disturbed. This is best effected by placing them in a separate building; an excellent arrangement exists in the case of one of the Hospitals in the Native Territories, where the Night-Nurses sleep in a Kafir hut placed at a distance of some 200 yards from the Hospital.

Accommodation and Arrangements for Out-Patients.

When designing new Hospitals or alterations to existing ones, the accommodation and arrangements for Out-patients should receive careful attention. I need not here enter into the many considerations involved further than to point out that the Out-patient accommodation should be so situated that patients do not require to come to or wait about the front of the Hospital, or to enter any part of the In-patient portion of the buildings; also, that the arrangements should be such that the patients enter the Consulting Room by one door and leave by another. Where the dispensing for Out-patients is not done in the room where the patients are seen by the Medical Officer, the corridor or passage for departing patients should lead past the Dispensary.

J. A. MITCHELL,
Assistant Medical Officer of Health
for the Colony.

Cape Town, 10th May, 1904.

GOVERNMENT AND STATE-AIDED HOSPITALS.

Dr. Mitchell's Report: Annexure "A."

REPORT FORM FOR OFFICIAL VISITORS.

(Page 1.)

..... Hospital,
..... 19.....

Sir,

I have the honour to inform you that you have been appointed Official Visitor to the Hospital during the ending19.....

Please furnish me with your Report in time for consideration at the Meeting of the [House Committee] to be held on

I have the honour to be,

Sir,

Your obedient servant,

.....

Secretary.

.....

.....

(Page 2.)

[Reprint of Regulations in force regarding Official Visitors.]

.....

(Page 3. Fly-leaf).

REPORT OF OFFICIAL VISITOR.

Please write your answers in the space provided for the purpose under the several questions; any extended report should be written on a separate sheet and forwarded to the Secretary with this form. Full particulars should be stated when the answer to any question renders such desirable.

DATE OF VISIT. 19.....

1. Were the Grounds, external premises, Wards and all other parts of the Hospital clean and in good order?
2. Were all Books and Records required to be kept by the Rules of the Hospital found to be neatly and properly kept and up to date?
3. Were the provisions supplied to the Hospital of good quality, and are the arrangements for the cooking and serving of meals satisfactory?
4. Was any formal complaint made to you by any Patient or Member of the Staff?
5. Are you satisfied from your observations that all Official Rules of the Hospital are being properly carried out and adhered to?
6. Is there any matter concerning the Buildings or Grounds or the internal administration of the Hospital which appears to you to call for attention?

Signed

Date19.....

Please tear off this fly-leaf and forward it to the Secretary.

GOVERNMENT AND STATE-AIDED HOSPITALS.

Dr. Mitchell's Report : Annexure " B."

HOSPITAL.

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER, 19.....

INCOME.	£	s.	d.	£	s.	d.	EXPENDITURE.	£	s.	d.	£	s.	d.
A. ORDINARY.							A. ORDINARY.						
I. Annual Subscriptions ...							I. Provisions :—						
II. Donations ...							Patients ...						
Boxes ...							Staff ...						
III. Hospital Sunday Fund ...							II. Stimulants, Mineral Waters						
IV. Hospital Saturday Fund ...							and Ice :—						
V. Congregational Collections ...							Patients ...						
(Apart from Hospital Sunday							Staff ...						
Fund).							III. Surgery and Dispensary :—						
VI. Entertainments, Fetes, &c.							Drugs, Chemicals, { In-						
VII. Receipts from Paying							Disinfectants, &c. { Patients						
Patients :—							Dressings, Band- { In-						
In-Patients—							ages, &c. { Patients						
Government							Instruments and { In-						
Patients £ : :							Surgical Appli- { Patients						
Others : :							ances, &c. { Out-						
Out-Patients—							Sundries ...						
Government							IV. Domestic :—						
Patients £ : :							Furniture ...						
Others : :							Bedding, Linen. &c. ...						
TOTAL : : :							Hardware, Crockery,						
Less Expenses							Brushes, &c. ...						
of Collection,							Washing { Nursing Staff						
Commission,							& Uni- { All other Washing						
&c. : :							Clothing { Nursing Staff						
VIII. Receipts from Property or							forms { Servants & Others						
Investments :—							Fuel ...						
Rents ...							Lighting ...						
Interest on Deposit Account							Water ...						
Receipts from other In-							Sanitary Services and Ex-						
vestments ...							penses ...						
IX. Grants by Public Bodies :—							Sundries ...						
..... Municipality ...							V. Funerals ...						
..... Divisional Council							VI. Salaries, Wages, &c. ...						
..... Harbour Board ...							Visiting Medical Staff ...						
Cape Government Railway							Resident Medical Staff ...						
Department ...							Administrative Staff ...						
X. Government Grant in Aid of							Dispensary Staff ...						
Maintenance ...							Nursing Staff ...						
XI. Other Receipts ...							Others ...						
TOTAL ORDINARY INCOME							All other Allowances ...						
B. EXTRAORDINARY.							VII. Miscellaneous Expenses :—						
I. Legacies :—							Rent ...						
Executors of.....							Rates and Taxes ...						
II. Special Donations ...							Insurance ...						
III. Special Grants by Govern-							Repairs ...						
ment ...							Printing and Stationery ...						
IV. Special Grants by Public							Postage and Telegrams ...						
Bodies :—							Advertisements ...						
..... Municipality ...							Commissions ...						
..... Divisional Council							Law Expenses ...						
V. Other Extraordinary Income							Interest on Loans ...						
TOTAL EXTRAORDINARY							Interest on Overdrafts ...						
INCOME ...							Sundries ...						
							TOTAL ORDINARY EXPEN-						
							DITURE ...						
							B. EXTRAORDINARY.						
							I. Alterations and Extraordinary						
							Repairs ...						
							II. New Buildings ...						
							III. Structural Alterations ...						
							IV. Loans Repaid ...						
							V. Other Extraordinary Expen-						
							diture ...						
							TOTAL EXTRAORDINARY						
							EXPENDITURE ...						
TOTAL INCOME ...							TOTAL EXPENDITURE ...						
							Balance ...						

GOVERNMENT AND STATE-AIDED HOSPITALS.

Dr. Mitchell's Report: Annexure "C."

.....HOSPITAL.

RETURN OF PATIENTS TREATED DURING THE YEAR ENDED
31ST DECEMBER, 19.....

					European.		Coloured, Natives and Asiatics.		Total.
					M.	F.	M.	F.	
IN-PATIENTS.									
Number of Beds provided									
Remaining in Hospital at beginning of year									
Admitted during the year:—									
Free									
Contributing									
Paying									
Government									
Total									
Classification of Patients Admitted:—									
Surgical Cases									
Ordinary Medical Cases									
Cases of Enteric Fever									
Cases of other Infectious Diseases									
Chronic Sick Cases									
Venereal Cases									
Average Daily Number of Patients in Hospital									
Average Stay of Patients (Exclusive of Chronic Sick):—									
Discharged—Days									
Died									
Remaining									
Operations:—									
With General Anaesthetic									
Without General Anaesthetic									
Deaths:—									
Surgical Cases									
Ordinary Medical Cases									
Cases of Enteric Fever									
Cases of other Infectious Diseases									
Chronic Sick Cases									
Venereal Cases									
Total									
Average Total Death-rate per cent. (exclusive of Chronic Sick and Venereal Cases)									
Remaining in Hospital at end of year:—									
Surgical Cases									
Ordinary Medical Cases									
Cases of Enteric Fever									
Cases of other Infectious Diseases									
Chronic Sick Cases									
Venereal Cases									
Total									
OUT-PATIENTS.									
Number of Attendances									

GOVERNMENT AND STATE-AIDED HOSPITALS.
Dr. Mitchell's Report : Annexure " D."

.....HOSPITAL.

ORDINARY EXPENDITURE AND AVERAGE COST PER PATIENT DURING
THE YEAR ENDED 31ST DECEMBER, 19.....

Heads of Expenditure. (See Annual Income and Expenditure Account).	Total.			Average Daily Cost per Patient.		*
	£	s.	d.	s.	d.	
A. IN-PATIENTS.						
I. Provisions						
II. Stimulants, Mineral Waters and Ice						
III. Surgery and Dispensary						
IV. Domestic						
V. Funerals						
VI. Salaries and Wages						
VII. Miscellaneous						
*TOTAL EXPENDITURE ON IN-PATIENTS						
B. OUT-PATIENTS.						
*TOTAL EXPENDITURE ON OUT-PATIENTS... ..						
* The sum of these totals should coincide with the Total Ordinary Expenditure shown on the Annual Income and Expenditure Account.						

Number of Daily Units of In-Patients						
(One Daily Unit=one Patient in Hospital for one day)						
Number of Attendances of Out-Patients						

N.B.—To find the Average Daily Cost per Patient under any head, divide the total expenditure for the year under that head by the number of daily units of In-Patients for the year. This number is the sum total of all Patients' stay in Hospital, expressed in days, *during the year*; the stay during the previous year of Patients remaining in Hospital at the end of that year must be omitted from the calculation. The sum total of daily units thus arrived at should coincide with the result of multiplying the average number of Patients in Hospital during the year by the number of days in the year, and also with the result of multiplying the number of Patients admitted during the year by their average stay in days *plus* the number of Patients remaining over in Hospital from the previous year multiplied by their average stay, in days, *during the year*. The average cost per patient per day or per attendance should be expressed in shillings and pence, the pence being carried to two places of decimals.

Dr. Mitchell's Report : Annexure " E."

.....HOSPITAL.

RETURN OF AVERAGE STAFF FOR THE YEAR ENDED
31ST DECEMBER, 19.....

Office or Employment.	Average Number.	Dieted.		Non-Dieted.		*Remarks.
		M.	F.	M.	F.	
Visiting Medical Officers						
Resident Medical Officers... ..						
Administrative Officers :—						
Secretary						
Clerks and Others						
Dispensers						
Nursing Staff :—						
Matron						
Senior Nurses						
Junior Nurses and Probationers						
Ward Attendants and Dressers						
Issuer of Stores, Steward, Housekeepers, etc.						
Subordinate Domestic and Hospital Em- ployees						
Laundry Staff						
Sewing Room Staff						
Others—For Farm, Garden, Grounds, etc. ...						
Total						

* Indicate any Officers or Employees who are only part-time or part-dieted.

GOVERNMENT AND STATE-AIDED HOSPITALS.

Dr. Mitchell's Report: Annexure "F."

..... HOSPITAL.

ACCOUNT OF PATIENTS' HOSPITAL FEES FOR THE YEAR ENDED
31ST DECEMBER, 19.....

DR.				CR.			
	£	s.	d.		£	s.	d.
To Receipts from Patients during the year :				By Amounts outstanding at beginning of year ...			
(a) Paying Patients ...				„ Expenses of Collection, Commission, &c ...			
(b) Contributing Patients ...				„ Amounts written off during the year as bad debts, due by :—			
(c) Government in respect of Patients ...				(a) Paying Patients ...			
(d) Out-Patients ...				(b) Contributing Patients ...			
„ Amounts due at end of year by :—				(c) Out-Patients ...			
(a) Paying Patients ...				„ Balance ...			
(b) Contributing Patients ...							
(c) Government in respect of Patients ...							
(d) Out-Patients ...							
	£				£		

Dr. Mitchell's Report: Annexure "G."

BALANCE SHEET AS ON 31ST DECEMBER, 19.....

LIABILITIES.				ASSETS. other than property used solely for Hospital purposes.			
	£	s.	d.		£	s.	d.
(1) Sundry Creditors (including all Tradesmen's unpaid accounts)...				(1) Cash at Bank and in hand :—			
(2) Loans to Hospital (to be detailed)				(a) Generally on Account of Hospital £ : :			
(3) Special Accounts (Legacies, Donations, etc., for special purposes to be detailed) ...				(b) On Account of Special Funds £ : :			
(4) Income and Expenditure Account				(2) Paying Patients' Fees outstanding			
Balance on 1st January ...				(3) Government Grant in aid of Maintenance (amount due but not yet paid) ...			
(Add excess or deduct deficit for the year) ...				(4) Funded Investments on Capital Account (to be detailed and Annual Income therefrom stated in each case) :—			
				(a) For Buildings and Equipment £ : :			
				(b) For Special Purposes ... : :			
				(c) For General Purposes ... : :			
				(5) Landed Property :—			
				Annual Revenue, £ : :			
				Valuation ... : :			
				(6) Quitrents :—			
				Annual Revenue, £ : :			
				Valuation, Capitalized at [6] % ... : :			
				(7) Sundry Debtors ...			
	£				£		

- NOTE—(a) Only such Assets are included as can be realized to meet the Liabilities. The following are therefore not included :—Hospital site, grounds and buildings, stock of furniture, fittings, equipment, linen, drugs and surgical dressings, instruments and appliances.
- (b) If amounts have, by due authority, been lent to the Hospital from any Special or General Fund, the loan should appear as a liability under "Liabilities" and as an investment of the Fund under Assets.
- (c) If it be inconvenient to set out the Investments of Funds in detail on the Balance Sheet, they should be shown in a Schedule to which reference should be made on the Balance Sheet.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE COLONY.

ANNEXURE "F."

REPORT OF THE BACTERIOLOGICAL ASSISTANT.

To THE MEDICAL OFFICER OF HEALTH FOR THE COLONY,

I have the honour to submit the following report on the work done during the year ending December 31st, 1903, in the Public Health Laboratory attached to this Office.

A.—*General Work of the Laboratory.*

The examinations made in the Laboratory during the year have been many and various. As will be seen from the accompanying table of specimens submitted, the majority were carried out in connection with the diagnosis of Plague in either man or animals. Rats numerically formed the largest proportion of the specimens dealt with. Up to the beginning of September, 1903, samples only of the rats caught or found dead in the Docks and Harbour Board Area were examined each day, but since the 14th of that month, every rat caught or found dead either on board ship or in the Dock Area has been submitted to a careful *post-mortem* examination, and, if considered to present symptoms suspicious to the naked eye of Plague, smears from the various organs were examined microscopically and inoculations made into susceptible animals. Many specimens were received from the various Plague or suspected Plague centres; and it is of interest to note that so far, in addition to man, we have only found Plague to infect rodents (rats, mice, veld-mice, bushrats), cats, ferrets, and dogs; never birds (pigeons, fowls or ducks); this I know is at variance with the Hong Kong experience. In addition we have failed to communicate Plague to birds by direct inoculation. Fowls, ducks, and pigeons harbour and die from the effects of the causal organism of Chicken or Fowl Cholera. This bacillus is microscopically very similar to the bi-polar form of the Plague organism, but can easily be differentiated by inoculation experiments.

On two occasions there have been several cases of highly suspicious Buboes amongst ship crews coming from what was at the time the Plague infected Port of East London. These Buboes on careful investigation proved to be the result of tick bites on the lower extremities. Particulars of these cases, which were investigated by Dr. J. A. Mitchell, Assistant Medical Officer of Health, and myself, are attached.

In addition to Plague work a large number of specimens sent by Medical Practitioners in Cape Town and the neighbourhood have been examined and reported upon, and many rare and interesting specimens have been secured with which I hope to form the nucleus of what may some day become the Pathological Museum of the South African Medical Profession.

Experiments have been carried out regarding the efficacy of "Clayton Gas" in the disinfection of cargoes and destruction of rats on board ships; and the utter uselessness of the present methods (tarring ropes, or placing any kind of disc upon ropes) to prevent rats passing from ship to shore or *vice versa* has been demonstrated. Particulars of these experiments, which were carried out jointly with Dr. J. A. Mitchell, are attached.

Since my return from the Pasteur Institute, where I studied the latest methods of preparing the Anti-Rabic Vaccine, a continuous series of rabbits has been kept going, but, like other things when one is prepared for them, the feared outbreak of Rabies in this Colony has fortunately not been experienced. We were able, however, to supply the Rhodesian Authorities with material when their strain of virus broke down.

The usual routine work of a Public Health Laboratory has been carried on; samples of milk, water, etc., have been examined for organic contamination; sputum for Tubercle Bacilli; smears from suspected Leprosy cases; blood for Typhoid and Malaria, etc. The disinfectants used by the Plague Administration have been examined and reported upon as to their germicidal properties, and in several Medico-legal cases assistance has been given regarding the nature of blood and other stains upon which the Authorities sought advice.

In connection with diagnostic work carried on in this Laboratory, I wish to take this opportunity of drawing your attention to the urgent need of a yard or some enclosed place where small animals under experiment could be kept. At present we are making use of the vacant space upon which the New Law Courts will be built, and which we may soon have to vacate. A yard and three or four rooms near the Laboratory is required, where small animals, guinea pigs, rabbits, rats, etc., could be kept while under experiment, and where infected animals and material sent for examination could be cremated.

During the year 1903, I was in charge of the Cape Town Morgue in Venken Lane, and have examined microscopically and made inoculations into animals, of all human cases of Plague or suspected Plague occurring in Cape Town and neighbourhood.

In the early part of the year the Morgue had a thorough overhauling, the cement between the slabs on the floor was replaced with fresh material, the walls were cleaned down and washed, and the wood work re-painted. Much inconvenience has frequently arisen from the want of a waiting-room and office at the Morgue, and the close apposition of the neighbouring buildings. Under the circumstances, it is not to be wondered at that some complaints arise from the dwellings on either side, and I would urge that every endeavour be made to secure more room, both inside the Morgue and round about it. No Morgue can possibly be anything other than a nuisance and sometimes a grave danger to public health if, like our Cape Town Morgue, it be completely shut in on either side and behind by private dwellings. I have often been at a loss to understand why, when a new Morgue was erected, no waiting-room or even ante-room was provided into which friends or relations, who come to identify bodies, could be shown.

In addition to Laboratory work, I have investigated various epidemics of infectious disease in the suburbs, and reported on the contamination of numerous water-courses in the Peninsula.

Details of Work done in the Public Health Laboratory attached to the Office of the Medical Officer of Health for the Colony, during the Year ending 31st December, 1903.

Specimens Examined.	Number..
Rats	7907
Rats found Plague-infected	256
Mice	156
Mice found Plague-infected	18
Cats	21
Cats found Plague-infected	4
Other Animals	3
Other Animals found Plague-infected... ..	0
Sputum for Tubercle	121
Swabs or membrane for Diphtheria... ..	16
Blood from cases of suspected Typhoid	30
Blood for Malarial parasites	6
Water samples (Bacteriological Examination)	20
Sewage Samples (Bacteriological Examination)	12
Urine	23
Tissues, Tumours, etc.	42
Glanders	2
Actinomycosis	2
Leprosy	78
Material from suspected Plague cases	91
Medico-Legal cases	12
Rabbits inoculated for Anti-Rabic Vaccine	146
Disinfectants Examined	7
Post-Mortems attended	227

B. -Enlarged Gland in Femoral or Inguinal regions, resulting from Tick bites on the legs; the Buboës simulating those of Plague.

The following particulars of a series of cases investigated by Dr. J. A. Mitchell and myself are of interest:—

1. *Four cases on board S.S. "Raglan Castle."*

The crew of S.S. "Raglan Castle," while at East London, were given permission to go ashore on the 12th, 13th, and 14th April, 1903. The vessel arrived in Table Bay on 21st April, 1903, and the same day the ship's Surgeon reported that four members of the crew were sick, having developed Buboës in the femoral and inguinal regions, accompanied by some rise in temperature.

When examined, three of the cases were found to have buboës in the region of the internal femoral gland; these men had marks of suppurating tick bites on inner aspect of leg. The fourth case had an enlarged gland in the right inguinal region; he had a suppurating tick bite on the right side of middle line in perineal region. Constitutional symptoms were very slight, and in no case was the temperature above 101·8.

2. *Two cases on S.S. "Southgrove."*

This is a small coasting steamer; she arrived at East London on the 16th May, 1903; several members of the crew were on shore from time to time; the boat left East London on 3rd June; arrived in Table Bay on 7th June. Two European seamen reported sick on 9th June; both had enlarged glands in the femoral region and a slight rise in temperature. When examined, H.G. stated that he suffered from headache for three days previous to noticing the swelling in his groin. The swelling seemed to be confined to the upper right femoral gland, which was about the size of a hazel nut, freely movable, and with no periadenitis to be made out. A small suppurating sore was noticed above the right inner malleolus; this sore was about an eighth of an inch

in diameter, and surrounded by an inflamed area of about half an inch. The second case, T.A., stated that he became ill on 9th June, 1903, with severe headache, and thought he was feverish. When seen on 12th June he had a temperature of 100° F., pulse 80, and tongue covered with a brownish fur. His left upper femoral gland was distinctly tender, but not enlarged, and no marks or abrasions could be found anywhere on his lower extremities. He was seen again next day, 13th June, when his femoral chain of glands on the *right* side were found to be enlarged, and were easily noticed as a visible swelling when he stood up. There was some increase in the size of the glands in the left femoral region also, but not so marked as in the right side. Temperature was still slightly up, and his headache continued.

On the inner side of his right leg, about three inches above ankle, there were now noticed three marks that looked like tick bites. Those inflamed areas increased in size during the next two days, the central portions becoming slightly raised and covered with a small whitish slough; round this white centre there was an inflamed area.

The central portion of the areas was gently scraped with a scalpel, and the scrapings examined microscopically, when the maxillary hooks by means of which ticks hold on when feeding were demonstrated.

C.—Experiments conducted with the Clayton Gas Apparatus to test its germicidal and rat-destroying properties.

1. In March, 1903, a barque arrived in Table Bay, and seeing there had been some suspicious deaths on board since she left a Plague-infected Port, and also taking into consideration the fact that she was in ballast, and had nothing in the shape of cargo that could possibly be injured by Clayton Gas, this boat was thought to be a suitable one on which to carry out some experiments.

The cubic capacity of the hold was 2,200 cubic metres, within which space some 450 tons of wet sand had been placed as ballast. Originally the ship had had a "tween deck," but this had been removed to give larger carrying capacity.

The following animals, fabrics, etc., were placed in the hold previous to starting the Clayton apparatus:—

Rats in wire cages were placed as follows:—(a) On top of sand on floor of hold. (b)

On remains of "tween decks." (c) Under sails on remains of "tween decks."

(d) Far forward. (e) Aft. (f) As high up in the hold as possible—right under upper deck.

Fleas.—Fresh, lively dog fleas in test tubes lightly plugged with cotton-wool were distributed over the hold.

Cockroaches were placed in wide-mouthed bottles and similarly distributed.

Pathogenic Organisms.—Slant agar cultures of the following were placed on "tween decks":—Typhoid, Cholera, Plague, Tubercle, Anthrax (sporulating).

Metals.—Bright polished brass work, new lacquered brass, bright steel instruments, silver plated instruments.

Seeds.—Mealies, Oats, Barley, Potatoes.

Print Stuffs.—Cretonnes, Sateens, and Silks of various colours and shades were exposed: (1) Wet; (2) Dry; (3) Covered up.

Fumigation was kept up for four hours, at the end of which time a sample of gas taken from the hold showed on analysis 4.4 per cent. of Sulphurous Oxide.

After being kept shut up tightly for 14 hours both hatches were opened, and a "wind sail" placed so as to drive air through the hold. After the hold had been opened for about four hours men were able to go below, but could only remain a few minutes, as the gas still caused discomfort. In about six hours after the hatches had been opened, there was still some unpleasantness from fumes of the Clayton Gas, more especially when we turned over a large bundle of sails.

The delay in clearing out the fumes was probably owing to the fact that there was not a breath of air blowing all the morning.

The following are the results of the experiments:—

Rats.—All were found dead. In addition 13 or 14 ship rats were found lying dead on ballast and amongst sails. This probably represented the total rat population of the boat, as there was no cover nor food for rodents on board.

The insects (fleas and mites) on the rats were also killed. It was noticed that rats killed by Clayton Gas had a peculiar white or yellow look about their eyes, apparently due to action of the gas upon the cornea and lens.

Fleas.—All were killed and appeared bleached. It is worthy of note that the eggs of the fleas deposited in the tubes before or while being fumigated were not killed, and they have since hatched out into larvæ.

Cockroaches.—Were all killed.

Pathogenic Organisms.—Typhoid, Cholera, and Plague cultures were killed.

Anthrax remained alive and virulent. Tubercle appears to be dead, as I have failed to kill animals inoculated from the culture exposed to Clayton Gas, and no sub-cultures have grown.

Metals.—Bright polished brass work was much discoloured, but was easily cleaned again with metal polish. A thin coating of vaseline gave great protection. New

lacquered brass was unaffected. Bright steel instruments were much tarnished, being made a dull leaden grey colour, and not recovering on polishing. Silver-plated instruments on steel were ruined, as far as silver plating was concerned.

Print Stuff.—Sateens, if slightly protected with even a single layer of paper, *e.g.*, in an envelope, did not appear to suffer much harm. When exposed without any covering many of the brighter colours were destroyed; the colours suffering most being purple, olive green, light green, scarlet, crimson and brown.

Cretonnes.—All lost something of their brightness, especially purple and green shades.

Dyed Silks of various colours were exposed:—(1) Wet Uncovered; (2) Dry Uncovered; (3) Dry Covered. Only black and green showed any loss of colour. Flannels were not affected.

No loss of strength of fibre in any of the samples was noticed.

Delicate Goods.—Leather unaffected.

Foods.—No special samples were exposed, but the Clayton Gas penetrated well into the storeroom (driving out two rats), and no complaints were made by the crew.

Cereals: Wheat, Oats.—Their germinating powers were absolutely destroyed.

Potatoes.—Fumigated potatoes sprouted slightly, but the shoots died after two days.

2. Another large steamer upon which several cases of Plague occurred while she was in Table Bay was disinfected with Clayton Gas, crew and passengers being on board all the time. The results in this case were very successful; many plague rats and over 150 freshly dead rats were discovered after the use of the gas.

3. A small coasting steamer trading between a Plague-Infected Port and Cape Town was disinfected by Clayton Gas, as a Plague-infected rat was found on board while in Cape Town Docks.

In this case the cargo was discharged before commencing operations, as it was considered that some injury might result to the large quantity of flour on board.

As an experiment, a 25 lb. bag of flour was placed in the hold of this boat, and subjected for four hours to the action of "Clayton" Gas.

The effect of the Gas on the rising properties of this flour was tried after four days. After disinfection the flour was not exposed freely to the air, but simply kept in the original bag. Ordinary baker's yeast was used as a "raiser," and control loaves were made from non-Claytonised flour.

The flour which had been subjected to the action of Clayton Gas did not "rise." Loaves baked from it were heavy and doughy, and quite unfit for food. Probably there was enough Clayton gas in the flour during the first few days either to kill or retard the growth of the yeast. After two weeks, when it might have been expected that the effects of the Clayton Gas would have passed off, the flour still remained incapable of "rising," and unfit for baking purposes.

As far as causing death to rats, flies, fleas, mosquitoes, cockroaches, bugs, and non-sporulating organisms, this experiment corroborated the experiments made on ships 1 and 2. In this case the sleeping bunks were covered with a layer of dead flies, mosquitoes, cockroaches, etc., and no complaint was made as to the action of the gas upon food stuffs.

D.—Experiments made with a View of Testing the Utility of Tar, or Discs on Ropes, as a Method of Preventing Rats Passing from Ships in Harbour to the Shore.

In the following experiments I had the able collaboration of Dr. J. A. Mitchell and Mr. G. F. Nicholson, Assistant Engineer-in-Chief to Table Bay Harbour Works.

It is a well-recognised fact that rats pass from ships in docks to the shore, by means of cables and ropes used to make the vessel fast; and that a Plague-infected rodent doing so would probably be the means of spreading Plague. With a view of testing the utility of the present means employed to prevent rats coming ashore, a large experimental tank holding water, and having two rat receptacles at either end, connected together by means of a stout cable, was rigged up so as to simulate as far as possible a rope connecting a ship with the shore.

Tar.—Three, four, and at last five feet of the rope was thickly coated with fresh tar, but this had not the slightest deterrent effect on rats passing along. They ran backwards and forwards on the rope without paying the least attention to the tar.

Discs.—A large galvanised iron disc 18 inches in diameter (as used at Eastern Ports) was procured from one of the British India boats in the docks, and fixed to the middle of the rope so as to separate the one rat box from the other. Small sized rats hesitated sometimes when they reached the disc, but once they had been shown the way by larger rats, they could easily spring from the rope on one side on to the edge of the disc, and so get to the other side.

It would be quite impracticable to use discs large enough (say, 48 inches in diameter) to prevent rats from getting over, as some rats can stretch 12 inches when standing on their hind legs. Even if the disc be made so that it revolves when a rat sits

on the circumference, this does not prevent rats having time to locate the rope on the far side and springing on to it.

Many and varied shapes of discs were tried, *e.g.*, funnel shaped, with the large end of the funnel fixed towards the direction from which the rat was coming; double cone shaped discs with their bases together, having sloping side coated with grease; discs of wire, etc., but rats managed to negotiate every obstacle in the shape of discs and get along the rope. Rats can get over a disc 20 inches in diameter, and any disc having a greater diameter than say 20 inches would get in the way of ropes, etc., at the dock side, and would soon be rendered useless by becoming indented. These experiments, although conducted upon a small scale, appear quite sufficient to prove the fallacy of trusting to tarring ropes or to discs of a workable diameter being able to prevent rats from migrating in either direction between shipping and the shore.

GEO. W. ROBERTSON,
Bacteriological Assistant in the Office of the Medical Officer
of Health for the Colony.

Public Health Laboratory,
Cape Town, 15th April, 1904.

PART I.

Reports of District Surgeons upon Public Health and Sanitation.

URGENT.

CIRCULAR No. 59, 1903.

Colonial Secretary's Office,
Local Government and Health Branch,
Cape Town, Cape of Good Hope,
1st December, 1903.

ANNUAL HEALTH REPORTS FROM DISTRICT SURGEONS AND ADDITIONAL DISTRICT SURGEONS.

SIR,

I am directed to request you to be good enough to call upon the District Surgeon and Additional District Surgeon (if any) to furnish his Annual Report and Returns upon the state of the public health and sanitation in his district during the year ending on the 31st December, 1903.

The Report and Returns should be prepared and forwarded to this office *as soon as possible* after the close of the year. The Report should deal with the general health and sanitation of the district, and the returns should furnish information upon the special subjects of Small-pox, Vaccination, the working of "The Contagious Diseases Prevention Act, 1885," Leprosy, and persons in receipt of Pauper Relief from Government.

While the Report, which should be as complete as possible, should be drawn up under the several headings, and in the order indicated below, so as to enable combination and comparison with other districts and with previous years to be made, the District Surgeon is invited to deal as fully as he may deem necessary with any matter which he considers deserving of special attention.

Should the District Surgeon not have at his disposal the information necessary to enable him to deal properly with a subject under any of the headings, and if you can ascertain the required particulars by correspondence with local or other authorities, or can in any other way assist him, I am to request that you will do so. In every case in which no information can be supplied under a heading, sub-heading or return, "nil" should be written against it.

The object aimed at in asking for these reports is to obtain, as far as possible, a complete, comprehensive and connected year's history of the health and sanitary condition of the Colony as a whole, as well as information particular to each district, especially in respect of any deficiency in sanitary control, or the existence of conditions inimical to health.

[G. 35—1904.]

B

The following are the matters which, *inter alia*, the District Surgeon should treat of, and, in reporting on any sanitary defects that exist and their remedy, he should state the length of time they have continued and the steps, if any, taken by the Local Authority concerned to remove them:—

(a) The condition of the water supplies, especially as regards their purity both at source and on delivery, their sufficiency, *the existence of any causes likely to lead to pollution, either at source or during storage or delivery*, and the steps which should be taken for bringing about improvement.

(b) Sewerage and drainage.

(c) The collection and disposal of night-soil, slop-water, and household and other refuse.

(d) Overcrowded dwellings and dwellings unfit for human habitation.

(e) The management of slaughter-houses, butcheries, bakeries, dairies, and other trades affecting health.

(f) The sale, storage and preparation of human food.

(g) The keeping of cattle, swine, and other animals.

(h) The order, cleanliness, and general sanitation of any Native Location or Camp of Natives under the control of any Local or other Authority within the district.

(i) Cemeteries and burial grounds.

(k) The abatement of nuisances generally.

(l) What hospital accommodation exists in the district for the isolation and treatment of cases of infectious disease, its nature, extent, and to what local authority it belongs.

(m) The presence or spread of infectious disease, especially Enteric Fever, Diphtheria, and Small-pox. The account of any outbreak of disease that has occurred in your district during the year should include information as to its situation; dates of its discovery and commencement and of the discovery and discharge of the last case; source of infection and how conveyed; number of persons attacked, with the number of deaths (distinguishing as far as possible between European and Coloured, adults and children), and the steps taken, with their effect, to suppress the disease, the isolation of the sick, the surveillance of those exposed to the infection, and under whose authority the steps were taken, *i.e.*, the Divisional Council, Municipality, Village Board, Resident Magistrate, Special Justice of the Peace, or by any of these combined, and in this connection it should be particularly stated whether the "Local Authority" has, in the District Surgeon's opinion, done all things necessary or possible for preventing or suppressing such outbreaks, and if not, in what respect omissions have occurred.

With regard to outbreaks of Small-pox, the cases should be classified into *pre-vaccinated* and *unvaccinated*, with the number of deaths in each class. Where vaccinated cases have occurred it should be stated whether the operation was done *prior* to the exposure to infection or not, and also, if possible, the degree of success accompanying the operation. Information should also be furnished as to the steps taken for carrying out vaccination and re-vaccination, with their effect on the outbreak.

With regard to vaccination you are particularly requested to give the fullest account of the amount of success you have obtained in the performance of the operation.

Also in the case of outbreaks of Enteric Fever the probable cause of the outbreak, especially with reference to contaminated water, milk or food supplies, should be discussed,

Also the total cost *incurred* in dealing with any outbreak of Small-pox should be given, distinguishing between that incurred directly by the Local Authority and that incurred directly by the Government.

With regard to outbreaks of Bubonic Plague, information concerning these is furnished to the Government through special channels, but I shall, nevertheless, be glad if you will supply information on the subject of the precautionary measures adopted in your district, and especially as regards the prevalence of rats and other rodents and the means adopted, and with what success, for their extermination.

Information is also desired regarding any special prevalence, with the cause, of any of the more unusual diseases, such as Scurvy, Epidemic Pneumonia, and the like.

RETURNS.—The annexed forms should be filled in as completely as possible:—Those marked B, D, and E by the District Surgeon with your assistance, and those marked A, C, F, and G by yourself.

You will be good enough before forwarding these returns to cause them to be carefully audited, in order to ascertain if they balance properly; that where figures are carried over from the previous year they are correct and agree with the returns of the *preceding* year; that all the figures are correctly entered in their proper columns, and that all additions, whether up-casts or cross-casts, are accurate, inasmuch as the omission of these apparently trifling precautions in regard to similar returns in previous years has entailed a large amount of subsequent trouble on both Resident Magistrate and District Surgeons, as well as causing great delay in dealing with the returns by this Department.

The Colonial Secretary wishes me to request you to give this matter your personal attention, in order that the information furnished may be as accurate and complete as possible, and that it may be returned to this office at the earliest possible moment, so that the Annual Report on the Public Health of the Colony may not be unnecessarily delayed.

I have the honour to be,

Sir,

Your obedient Servant,

NOEL JANISCH,
Under Colonial Secretary.

To each Resident Magistrate and
Assistant Resident Magistrate.

A.—Return of Persons in receipt of Pauper Relief in the District ofduring the Year ended 31st December, 1903.

Name of Person.	Able-bodied or Infirm.	European.		Coloured.		Leper.	Lunatic.	Syphilitic.	Ordinary.	Form of Relief.		Number of days in receipt of relief.
		Approximate Age.								Indoor.	Outdoor.	
		M.	F.	M.	F.							
Total											

Dated at.....

.....1904.

.....

Resident Magistrate.

NOTE.—All Lepers, Lunatics and Syphilitics figuring on this Return should appear also on Return "G," the "Lunatic" Return and "E" respectively. If they do not, please explain to avoid querying.

N.B.—Before forwarding this Return kindly verify all the entries therein, and ascertain that all additions, both up-casts and cross-casts, are correct, in order to avoid querying.

B.—Return of Outbreaks and Cases of Small-pox also called Amaas occurring in the District of.....during the Year ending 31st December, 1903.

[illegible]

Dated at.....

.....1904.

District Surgeon.

N.B.—Before forwarding this Return kindly verify all the entries therein, and ascertain that all additions' both upcasts and crosscasts, are correct in order to avoid querying.

C.—Return of Expenditure incurred for the suppression of Small-pox in the District of.....during the year ending the 31st December, 1903.

SERVICE.					Expenditure incurred from 1st January to 31st December, 1903.			
					Directly by Government.		*Directly by Local Authority.	
Special Allowances or Payments to District Surgeon (exclusive of Vaccination)				
Travelling Allowances to District Surgeon do.				
Payments to Private Practitioners				
Travelling Allowances to District Surgeon. Vaccinating				
Special Allowance (if any) to District Surgeon for Vaccinating				
Payments to Lay Vaccinators				
Payments to Nurses, Guards, Police, &c.				
Cost of Provisions and Supplies				
Cost of Construction. Purchase or Rent of Hospital, Buildings, Huts, Tents, &c.				
Cost of Bedding, Clothing, Furniture, Utensils and Equipment				
Cost of Medicines				
Transport of Patients, Supplies, &c.				
Payments made in respect of Compensation for Infected Private Property destroyed				
Miscellaneous Expenses...				
Total				

Dated at.....

....., 1904.

Resident Magistrate.

* Including any share of expenditure that may be claimed from Government under the provisions of Act No. 23 of 1897.

D.—Return of Public Vaccination performed in the District of.....
.....during the year ending 31st December, 1903.

[illegible]

NOTE.—Also please state the number of arm to arm Vaccinations performed.
Also approximately the number of Vaccinations performed by Private Practitioners in the District.

Dated at.....

N.B. —Before forwarding this Return, kindly VERIFY all the entries therein, and ascertain that all additions, both up-casts and cross-casts, are correct in order to avoid querying.

F.—Return of Cases under Medical Treatment under Part II. of “The Contagious Diseases Prevention Act, 1885,” in the District of.....
.....during the Year ending 31st December, 1903.

[illegible]

* The name of each individual patient is to be filled in here, and the required particulars corresponding to it inserted in the proper columns opposite to it.

† The patients entered in this column should agree with those returned last year as still remaining under treatment on the 31st December, 1902.

** The object in asking for this information is to ascertain as far as possible to what extent the disease is innocently acquired.

NOTE.—In filling in this return, the District Surgeon should first enter all the indoor patients and then all the outdoor patients. This will greatly facilitate the work of abstracting the Return at this Office.

N.B.—Before forwarding this Return kindly verify all the entries therein, and ascertain that all additions, both up-casts and cross-casts, are correct in order to avoid querrying.

Dated at.....
.....1904.
District Surgeon.

F.—Return of EXPENDITURE incurred during the Year ending 31st December, 1903, in connection with Part II. of “The Contagious Diseases Prevention Act, 1885,” in the District of.....

SERVICE.	EXPENDITURE.	
	Incurred from 1st January to 31st December, 1903.	
1. District Surgeon's Expenses :—		
(a) Travelling Expenses		
(b) Fixed Commuted Allowance (if any)		
(c) Fees for Medical Attendance and Medicines		
(d) Other Charges (if any)		
2. Cost of Buildings, Construction and Repairs		
3. Rent of Buildings... ..		
4. Cost of Furniture, Utensils and Fittings		
5. Cost of Bedding and Clothing		
6. Cost of Provisions, Medical Comforts, Fuel, Light, Soap, Lime and other Supplies or Services		
7. Salaries and Allowances of Nurses, Attendants, Guards, &c.		
8. Payments made to Managers of General Hospitals for Treatment and Maintenance of C.D. cases		
9. Miscellaneous or Special Expenses		
Total		

Dated at.....

.....1904.

.....
Resident Magistrate.

G.—Return of Lepers dealt with or living in the District of..... during the year ending 31st December, 1903.

	Number living in the District and on the Register on the 31st Dec., 1902.		Number of fresh cases registered during the year ending 31st Dec., 1903.		Total number of cases on the Register during the year ending 31st Dec., 1903.		Number removed from the Register during the year ending 31st December, 1903.								Number remaining on the Register and being still in the District on the 31st Dec., 1903.	
	M.	F.	M.	F.	M.	F.	Sent to Asylum.		* Died.		Disappeared or absconded.		Disease arrested or in abeyance.				* Found not to be suffering from Leprosy.
Europeans—																
Tubercular Leprosy ...																
Anæsthetic Leprosy ...																
Mixed Leprosy ...																
Coloured—																
Tubercular Leprosy ...																
Anæsthetic Leprosy ...																
Mixed Leprosy ...																
Total ...																

NOTE.—Are there any reputed lepers in the district who are not on the Leper Register; if so, please insert particulars here :—

	Males.	Females.
Europeans		
Coloured		

Dated at.....

.....1904.

.....
Resident Magistrate.

* It is requested that all persons whose names are on the Register be kept under observation, so that any removals from these causes may be immediately entered on the Register. This is especially desirable in the case of those suspected persons, in regard to whom the District Surgeon may have become satisfied that they are not suffering from Leprosy.

N.B.—Before forwarding this Return kindly VERIFY all entries therein and ascertain that all additions, both up-casts and cross-casts, are correct, in order to avoid querying.

I.—REPORTS OF DISTRICT SURGEONS.

1. ABERDEEN.

DR. H. C. BEDFORD, DISTRICT SURGEON.

As I have fully reported upon the questions (a) to (i) inclusive for many years past, and as nothing has been done or effected in the way of improvements during the past year, I beg to refer you to my previous reports.

The number of births reported during the year is 274 as against 240 in the previous year, namely:—

Europeans.		Coloured.		Total.
Male.	Female.	Male.	Female.	
91	78	44	61	
<hr/>		<hr/>		
169		105		274

The number of deaths registered during the year is 119, as against 139, during 1902. The causes of death registered were:—Enteritis, 14; Consumption, 17; Convulsions, 15; Bronchitis, 9; Diarrhœa, 7; Whooping Cough, 6; Senile Decay, Debility, etc., 6; Pneumonia, 7; Broncho Pneumonia, 5; Inflammation of Brain, 1; Epilepsy, 3; Cancer, 1; Dentition, 2; Accident, 3; Typhoid, 3; Childbirth, 1; Simple Fever, 2; Erysipelas, 2; Croup, Membranous, 1; Puerperal Fever, 1; Peritonitis, 1; Tetanus, 1; Scarlet Fever, 1; Acute Mania, 1; Influenza, 1; Syncope, 1; Disease of Liver, 1; Alcoholism, 1; Heart Disease, 2; Embolism, 1; Badly defined, 2.

Eleven cases were notified in the town during the year, under the Public Health Act:—Typhoid Fever, 5; Puerperal Fever, 2; Amaas, 1; Diphtheria, 1; Membranous Croup, 1; Scarlatina, 1.

Whooping Cough has been prevalent since the commencement of the year, and was still so at its close, especially in the country. A case of Diphtheria made its appearance in a house where there were several children; serum was used as a prophylactic, and after the recovery of the case, the house was thoroughly disinfected, by order of the Local Authorities. The case of Membranous Croup notified proved fatal. Diarrhœa, which periodically makes its appearance in November, only did so about a month later, no doubt due to the cool weather we had during that month. It was quite an epidemic in the town during December, of an aggravated type, more like Dysentery.

There have been several outbreaks of Amaas. The first occurred in January, at Aberdeen Road Station, where a coloured woman was taken ill, who had contracted the disease in Graaff-Reinet. The second case was in February, at Frensfontein. A coloured woman and two children visited Graaff-Reinet, all had been vaccinated some time previously, but one child unsuccessfully so; the latter, shortly after their return home, developed the disease. In August it made its appearance in town, when a European male developed the disease. He had been visiting for several weeks in the districts of Willowmore and Steytlerville, and a few days after his return became ill. The house, with its inmates, was isolated, and as the servant had been to the location, all those who had come in contact with her were vaccinated. The total cost incurred by the Municipality amounted to £10 3s. 0d.

On the 1st of December I saw three cases of Amaas at the farm Somerville. About a month previously a coloured woman from the Steytlerville

District visited the family on the farm, at an outstation; shortly after her arrival she became ill: The household that she visited consisted of several members, all of whom had been vaccinated the previous year, except one daughter, who was away from home at the time, and she developed the disease. On the day of my visit, a coloured child staying near the homestead developed the disease; he was one of a family who had, some months previously, arrived from another district, where they had been vaccinated, but not all successfully; this child being one of the unsuccessful cases. I vaccinated and re-vaccinated all the coloured people at the homestead, and I believe they were all removed from the homestead to an outstation, where, subsequently, two more developed the disease. The total cost incurred by the Divisional Council for the year amounted to £14 5s. 0d.

No case of Leprosy came under my notice.

As regards vaccination, comparatively little was done during the year.

2. ALBANY.

DR. J. B. GREATHEAD, DISTRICT SURGEON.

(a) Water-supply.—(1) Most houses in the towns and in the country conserve a supply of rain-water from roofs, the water being collected into iron tanks or into underground, cemented wells. The purity of this water depends upon the care taken by individuals in keeping their roofs and tanks clean. I call recall no cases of illness arising from the use of such water. (2) The public supply is provided from open reservoirs, and is generally good. The Milner Reservoir, situated about seven miles from Graham's Town, is almost full, and has greatly improved the supply of late. The Grey, Hamilton, and Douglass Reservoirs are close to the town, and well enclosed by wire fences. The water from the reservoirs is delivered through iron mains and pipes, which are clean, and in many parts almost new. The supply, though plentiful, is not constant. Up to the present the much-needed filter beds in connection with the reservoirs have not been provided.

The Native Locations have but a meagre supply of water from the public service, and a delivery by pipes to this area is a great want.

(b) There is no sewerage system. The only drainage system consists of surface drains for storm-water at the sides of the streets, and these gutters lead into the open natural rivulets or sluits at the head of the Kowie River. An effort is being made to pave these latter, to prevent soakage and stagnant pools.

(c) All cesspits have been emptied and done away with. The only legal method for the disposal of night-soil is by a faulty bucket system, carried on by private enterprise. The contents are carted away in stinking conveyances licensed by the Municipal Authorities. The deposit pits, or trenches for night-soil are provided by the Authorities at a site about one mile from the town. A Sanitary Inspector keeps a watchful eye that the tubs are not allowed to overflow, and several offenders have been fined for breach of sanitary rules. This is an improvement upon the former methods, but the time has arrived for a proper system of removal, which should be managed entirely by the Municipality.

In a few instances, such as at the large schools, slop-water is removed by licensed carts, but at far too great an expense for this plan to become popular. The smaller dwellings are compelled or are allowed to throw their slops on to the public streets, or into the storm-water drains. There is no cheap provision made for the removal of rubbish.

(*d*) Overcrowding is not heard of within the town, but may be indulged in without restraint in the Locations. I am not aware of any dwellings unfit for habitation being in use.

(*e*) Slaughter-houses, butcheries, bakeries, and dairies are under inspection by the Health Officer, and are clean and well-ordered.

(*f*) The sale and storage of human food is under inspection, and there have been convictions for adulterations of articles of diet.

(*g*) Cattle for dairy purposes are kept within the town. The Dairy Act is not in force. Swine are seldom seen in the town.

(*h*) The Native Locations are slovenly and untidy, and no system of sanitation is in force. A few latrines exist both in location and town for the use of natives.

(*i*) Cemeteries and burial grounds are well situated, and not a source of danger to the public health.

(*k*) An active Sanitary Inspector has been appointed, who does his work without fear or favour; the result being a general improvement in these matters, and the city is probably cleaner than it has ever been. There is, however, a most urgent need of a sanitary system under the immediate management of the Municipal Authorities.

(*l*) The Victoria Fever Hospital, now nearing completion, will provide sixteen beds for infectious cases, and it is hoped that the Equifex Disinfecter provided for this Hospital will also prove a boon to the town at large. This institution is under the authority of the Board of Management of the Albany General Hospital.

(*m*) Notifications of infectious diseases for the year number sixty—the smallest since compulsory notification has been in force. The diseases notified were:—Diphtheria, 25 cases; Enteric Fever, 15; Scarlatina, 9; Small-pox, 6; Leprosy, 4; Bubonic Plague, 1.

A special Small-pox Officer was appointed, and under his supervision the cases of Small-pox ~~were~~ promptly removed to the Lazaretto. I am, therefore, not in a position to give further particulars.

In March, a native man arrived at the Railway Station in a dying condition, having travelled by a night train from Port Elizabeth. He was too ill to move from the station, and died within an hour of his arrival. Having been promptly summoned, I was enabled to secure most of the contacts on the spot. These were detained under a guard until the cause of death could be ascertained. The ready help given me by the Bacteriological Institute confirmed the case as one of Bubonic Plague. The contacts were inoculated with Yersin fluid, and kept in quarantine, with the happy result that no further case occurred. Large numbers of rats and mice have been destroyed at the instigation of the Municipal Authorities.

With regard to vaccination, there has been no opportunity of estimating with the least accuracy the efficacy of the lymph; but speaking generally, I believe the results were satisfactory.

The Local Authority, with the Health Officer, has been prompt in dealing with any outbreak of infectious disease.

3. ALBERT.

(*i*) ALBERT.

DR. JAS. T. BOLGER, DISTRICT SURGEON.

(*a*) Owing to the extreme drought, the water-supply during the latter half of the past year was very restricted indeed, so much so, that the higher-lying portions of the town were sometimes supplied with a small,

weak stream, for as little as half an hour or so daily. In order to economise, the Municipal Council had to cut down the supply to two hours night and morning. Towards the end of the drought, a fresh spring was brought into requisition, and on the connection being made, the water delivered in the dorp was very muddy: thus giving evidence of some surface pollution. The same thing occurred after the rains, but so far I have been unable to trace any ill effects from what is certainly an undesirable circumstance. As I am not the Medical Officer of Health here—there is no such functionary—I am not in a good position to move in the matter of remedying this defect, even supposing it is capable of being remedied.

(b) Sewerage and drainage call for no other remarks beyond those made in previous reports.

(c) Collection of night-soil was unsatisfactory in one detail, the same as pointed out in last year's report. This, however, there is no doubt, will be remedied when funds are more plentiful. As regards slop-water, I am very pleased to report that a very great improvement has been effected. This work is now done by the Municipality, and all that remains is to see that each householder avails himself of the means provided, and sets a suitable tub or other receptacle apart for the temporary storage of slop-water until such time as the cart comes round to collect it.

(d) Overcrowding is not now, as far as I know, an existing evil.

(e) I have nothing to add to the remarks of previous years.

(f) These conditions, so far as my knowledge extends, call for no adverse criticism.

(g) The Sanitary Inspector almost invariably reports that all yards are well-kept.

(h) The Location is cleaner than it formerly was, but its condition is not so good that no further effort towards improvement is called for.

(i) These are not a danger to health here.

(k) The Municipal slop-water cart will, if properly managed, abate the nuisance formerly caused by householders adopting the cheap but nasty system of throwing out evil-smelling slops on to the public roadway, or into their own or their neighbours' yards.

(l) Absolutely none; and what is worse, there seems no prospect of any change. The need is pretty urgent, as the outdoor treatment of Syphilis in natives is the greatest farce possible. Further, to my knowledge there are cases of this disease now in the dorp in white children, in which the cause was almost certainly accidental inoculation from native nurse girls.

(m) The number of cases of Typhoid is much the same as in the last few years. With regard to Small-pox, the first two outbreaks certainly originated in Basutoland, in the other instances, the origin was not so certain. The measures taken were absolutely successful in preventing the spread of the disease, a matter of the greatest importance.

I would here remark, that it is quite impossible to always account for vaccination results in such a district as this, for the reason that generally, there is no opportunity of inspecting most of those vaccinated. I have no hesitation, however, in saying that the results were very satisfactory.

Further, as regards the suppression of Small-pox, I would like to say that the Divisional Council, through their Chairman and Secretary, left nothing undone to ensure the success so happily attained.

(ii) SUB-DISTRICT OF VENTERSTAD.

DR. ALBERT P. COATES, ADDITIONAL DISTRICT SURGEON.

The health of the District has been fairly good during the year, but, owing to continued severe drought, several epidemic outbreaks occurred during the later months, especially Bronchial troubles.

(a) The water-supply failed rather badly during the last four months of the year, but the quality remained unimpaired throughout, and pollution is practically impossible.

(b) There is neither sewerage nor drainage.

(c) During the year the Municipal Council instituted a cart for the removal of refuse, which is now satisfactorily disposed of.

(d) There are now fewer overcrowded dwellings than formerly, and many new houses have been erected during the year.

(e) The slaughter-houses are now regularly inspected by an official of the Local Authority, which has had a good effect on the management.

(f) Very little human food is prepared in this District, but that little is in the hands of private individuals, and it is not easy to give an opinion thereon.

(g) There are so few animals kept in the village that their presence is no inconvenience.

(h) The Native Locations, of which there are two, are now much more cleanly and orderly than used formerly to be the case. They are also inspected frequently, which probably accounts for the change.

(i) The cemeteries are fairly well kept.

(k) It may be fairly stated that there is an effort being made by the Local Authority to improve the village, and there is a considerable abatement of nuisances, in that the Municipal Council now cause household refuse, and such like, to be removed, instead of allowing it to be done by individual householders, as used formerly to be the case.

(l) There is no hospital accommodation whatever, which is truly a terrible state of affairs.

(m) There were only five cases of Enteric Fever during the year. Three cases occurred in the village, and two were brought in from a farm ten miles away. The first case came under notice on the 23rd of February, and the last case, a fatal one, occurred in August. The source of infection could not be ascertained. The water in the village is so protected from contamination, that it is impossible to suspect it of being the cause. The milk supply is not so far above suspicion, and the animals supplying it are allowed to graze over ground that was occupied by a camp for several months in 1901 and 1902. The water-supply on the farm, where two of the cases occurred, is open water, and apparently good enough. This farm was also the scene of a camp for some considerable time. There were two deaths, both European adult males. All cases occurred in private houses.

There was no Diphtheria.

There were two outbreaks of Small-pox, both on outlying farms. The first case occurred on 5th January; the last was still in progress on 31st December. Source of infection could not be even vaguely got at. Three persons in all were attacked; no deaths occurred. One was an unvaccinated case, and by far the worst. Two were pre-vaccinated; one, a very slight attack, occurred in a coloured adult male, who had been successfully vaccinated about twelve months previously; the other, somewhat more serious, was a coloured adult female, who was vaccinated an uncertain time previously, and whose vaccination marks were faint. Upon its being ascertained that the disease was Small-pox, the patients, and contacts were isolated, separately, in huts, at a considerable distance from the homestead, and no person was allowed within 300 yards of the huts. The contacts were successfully vaccinated, and released when it became apparent that they had not contracted the disease. These proceedings were undertaken at the instigation of the Divisional Council. In every case every person, without exception, on the farm, was either successfully vaccinated, or vaccinated, and re-vaccinated until it became

quite apparent that they were immune. In most cases also the adjoining farms were visited, and similar vaccination carried out ; no Natives were allowed to visit or leave any infected farm without having previously obtained a certificate of having been successfully vaccinated. The disease did not spread in either outbreak. Only lymph from the Bacteriological Institute at Grahamstown was used. There was no ease of failure in a primary vaccination ; the success in re-vaccinations was about 55 per cent. ; there was no successful ease recorded in a second re-vaccination, and almost all these failures—as far as could be ascertained—had been successfully vaccinated in recent years.

In my opinion the Local Authority—in these cases, the Divisional Council—did all in their power to suppress these outbreaks, but, I regret to say, they are now objecting to defray the cost. On the release from quarantine of the Natives at Klipfontein, who had the disease, everything belonging to them, that could possibly convey infection, was burned in my presenee by order of the Divisional Council. These things were first listed and valued by me, the value being placed as low as possible, but now these unfortunate people are unable to recover the amount lost by their property being destroyed for the good of the community. If this false economy is persisted in, it will inevitably lead to future sufferers concealing their effects as far as possible, the results of which it is unnecessary to dilate on. The cost incurred directly by the Local Authority, including full cost of the property destroyed, was £88 7s. d. ; that directly by the Government, nil.

There was no Bubonic Plague, nor any unusual diseases such as Scurvy, Epidemic Pneumonia, etc.

There are no rats at all in this district or village, and no steps have been taken to destroy any kind of rodent.

4. ALEXANDRIA.

DR. G. E. DOUGLAS, DISTRICT SURGEON.

The general health of the District was not up to the standard of former years, mainly owing to the changeable weather. There was a severe epidemic of Measles and Whooping Cough, with complications, thereby much increasing the infantile mortality. There was also an outbreak of Small-pox.

(a) The water-supply for household purposes is from rain-water collected in tanks. Owing to the prolonged drought, the inhabitants had in some instances to use the dam water, which is not fit for the purpose. In October there was a very heavy rainfall, completely flushing out the dams and gutters, and washing away all refuse. These were in a most unsatisfactory state, and the rains were most beneficial. There has been an even rainfall, since, which has much improved the district. The huts situated above the dam are still a source of pollution and nuisance, but it is hoped the Local Authority will soon have power to rectify this.

(b) There is no system of sewerage or drainage.

(c) The inhabitants dispose of this as they think fit. The village is undermined with cesspools, and it is quite time that some other system should be introduced.

(d) There are several Hottentot huts unfit for dwelling places, and much overcrowded ; but I presume these will be attended to by the Village Management Board when authorised to act.

(e) The same as in former years. I have over and over again reported on the slaughtering of animals within the precincts of the village, but no notice has been taken of it. The practice is most injurious to the health of the inhabitants, and some spot outside the village should at once be appointed for slaughtering.

(f) Satisfactory.

(g) The same as in former years.

(h) There are none under local control.

(i) The cemeteries are suitably situated, and well conducted.

(k) Early in the year a meeting of householders was convened to discuss the much-talked-of Village Management Board. Three members were elected, who met and drew up regulations on the lines laid down in the Model Regulations of the Public Health Amendment Act. These regulations were duly forwarded to the proper Authority at headquarters, but although the names of the Board appeared in the *Gazette* nearly a year ago, they have so far heard nothing of the regulations framed by them, and the matter still appears to be in *statu quo*. It is certainly most advisable that the Board should be enabled to put their rules into force as soon as possible, and I have no doubt when this is accomplished, many of the defects and nuisances now existing will at once be remedied.

(l) There is at present no isolation hospital excepting the Contagious Diseases Hospital, and I would most strongly urge the necessity of erecting some form of building into which infectious diseases could be at once admitted. If an urgent case should arise, there is no place available. An iron building could at small cost be erected on some suitable spot away from the village, and would not only be a saving to health, but to expense, if an epidemic should break out.

(m) Small-pox broke out in the Gaol in April, in the person of a prisoner, who had come from the Uitenhage District. The prisoner was isolated in Gaol as far as the building permitted, and all necessary precautions taken to prevent the spread of the disease; but it was four days before permission could be obtained to remove the prisoner from the Gaol to a hut on the commonage provided for his reception. Guards were appointed, and a contact admitted to the camp, and a tent provided. The patient suffered from a severe attack of Confluent Small-pox, but eventually recovered, and there was no spread of the disease in the Gaol or village. Another case occurred on the farm Boschfontein, some fifteen miles away. The patient, a Bastard, was isolated in the bush, and a guard appointed. The patient made a good recovery. I was not notified of the case until the rash was well out. There was, however, no spread of the disease in this part. About the same time the disease broke out at Sandflats, and along the railway line. Dr. Tyndall was appointed Medical Officer, and he has already reported on the epidemic.

During the year, some 3,000 persons were vaccinated by myself. Owing to no second visit being authorised at each centre, one cannot report in anyway accurately on the success or non-success of the operation. However, from hearsay, and from those cases which I was enabled to personally examine, I consider it was generally satisfactory, and more so than in former years.

5. ALIWAL NORTH.

(i) ALIWAL NORTH.

DR. FRED. FULSS, DISTRICT SURGEON.

(a) The Aliwal North Water Scheme will soon be an accomplished fact. The weir across the Orange River is almost completed, and from there the water will be pumped to a reservoir on the race-course, above the

town, and led into the town by means of pipes. This arrangement will ensure a pure water-supply.

(b) There is no proper drainage or sewerage system.

(c) Night-soil is collected in galvanised-iron tubs, and properly disposed of in trenches. It is, in my opinion, an absolute disgrace that the slop-water and refuse are allowed to be thrown broadcast, wherever each householder may think proper. The sooner a proper system for the removal and disposal of the above is inaugurated the better.

(d) Nil.

(e) There are no proper dairies. The slaughter-houses, butcheries, and bakeries are kept clean.

(f) I have seen meat on the market which was unfit for human consumption, but these cases have been dealt with by the Medical Officer of Health for the town.

(g) The cattle kraals are clean as a whole. No pigs are allowed in the town.

(h) The Municipal Location proper is situated at a suitable distance from town, and is kept clean. The location known as "Greathead's Location" is situated above the town, on the banks of a ravine, which empties itself into the Orange River above the town. I have several times examined this location, and have found sterco and rubbish on the banks and in the ravine.

I am of opinion that this location is a source of danger to anyone taking drinking-water below the point where this ravine enters the Orange River, especially when the latter is low.

(i) The English Cemetery is well-kept. The Dutch Cemetery is being gradually built round with dwelling-houses, and should be closed, and removed to a spot further from the town.

(k) The Town Council and their Medical Officer of Health check any nuisances that may crop up.

(l) Unfortunately, no hospital exists for the treatment and isolation of cases of infectious disease. The need for such hospital is acutely felt.

(m) The only disease that assumed anything of an epidemic character was Small-pox.

During the year, twenty cases of Enteric Fever, forty-eight of Small-pox, eight of Chicken-pox, nine of Scarlet Fever, and three of Diphtheria were reported.

As regards the Small-pox in the town, which was dealt with by the Medical Officer of Health, that officer reports as follows:—"Date of occurrence of first case of Small-pox was in November, 1902; then from January to March, 1903, thirty-nine cases occurred, and from March to August 29th, eight cases. Last case was discharged on September 18th, 1903. These were all natives. The first case was found at a native restaurant. There were four deaths—three adults and one child. The isolation camp was pitched a good mile from town; contacts were placed in an observation camp, and vaccination energetically carried on. The majority of the cases had not been vaccinated, but many had been vaccinated unsuccessfully. In all cases vaccinated with fresh lymph from Graham's Town, there were successful results.

"The causes of the Enteric Fever cases were not determinable.

"Destruction of mice and rats has been encouraged by the Municipal Council. No cases of Scurvy or Epidemic Pneumonia have been reported."

In my opinion, the Town Council did everything to suppress the epidemic in the town.

As regards the outbreak in the country, the first one commenced on the farm Ruigtefontein, about an hour from town. At the time of the outbreak, the farm was being used as the Government Serum Station, and there were a good many natives working there. Only two boys were

affected, and they both recovered. In the first case the native was not vaccinated; in the second, he was only vaccinated a few days before he contracted the disease in a mild form. The steps taken in the matter were as follows:—(1) The sick men isolated and guarded; (2) Twelve contacts isolated and guarded; (3) After recovery, clothes burned, and patient washed several times with a solution of dip. The first case was discovered on the 11th January, 1903, and the last case was discharged on the 22nd February, 1903. All steps were taken on the authority of the Resident Magistrate.

The second outbreak occurred on the farm Buffelsvlei, near the town. When discovered, on the 14th August, 1903, the outbreak must already have been in progress for some time, as one of the patients was convalescent when discovered. Two had already had the disease some time, and the fourth had already contracted it a few days. Two took the disease after it was discovered. In four, the disease had occurred in unvaccinated persons, and in two in vaccinated cases which had not taken. All the cases were natives, and they had probably brought the disease from the town location. The steps taken to stop the outbreak were immediate vaccination, re-vaccination of the whole lot of natives in the small location, which were twelve in number; two guards were employed to prevent anyone from leaving or approaching the location. All these precautions were taken under the authority of the Divisional Council. There were no deaths.

The last case was discharged on the 22nd September, 1903.

The cost of the outbreak in the town of Aliwal North amounted to £673.

The cost of the two outbreaks in the country, on the farms Ruigtefontein and Buffelsvlei, amounted to £54.

(ii) SUB-DISTRICT OF LADY GREY.

DR. H. R. FORSTER TOWNE, ADDITIONAL DISTRICT SURGEON.

The general health of this town and district was very good in the beginning of the year. From October there has been an epidemic of Diarrhoea, which is still prevalent. The Diarrhoea is undoubtedly due to the failing water-supply. At first the attacks were mild, but the disease is now becoming more serious, hæmorrhage and great prostration being marked features.

During the last two weeks of December, two cases of Enteric Fever have been reported, one European and one native, both being taken ill outside the town, and coming into the town for treatment. The European contracted the disease at the farm Naudeesfontein, where there is a Railway Construction Camp, and the native at Naauwpoort.

In view of the bad state of the town water-supply, Enteric Fever in the town is a serious matter, and may lead to a severe epidemic. The construction of the Aliwal North-Quinting line is now proceeding, and many natives are employed. These natives should be carefully supervised, and at regular intervals should be medically inspected, so that the Construction Camps should be kept free of infectious diseases.

There has been no public vaccination during the past year, but all contacts at the outbreaks of Small-pox were vaccinated, as well as all the people residing on or near the infected farms. Many natives were vaccinated who were leaving the district looking for work. The lymph supplied from the Bacteriological Institute of Graham's Town was not so satisfactory as in preceding years, there being many failures. The lymph was obtained from calves Nos. 3,253 and 3,339. It is impossible to give

accurate statistics as to the number of successful and unsuccessful vaccinations, as the majority vaccinated, those natives who were looking for work, were not seen again after the operation.

There were no cases treated under the Contagious Diseases Prevention Act.

There was one case of Mixed Leprosy; the patient was a Bastard woman who was residing in the Hottentot Location. She has been removed to the Leper Asylum. There are now no cases of Leprosy in the district.

Two native children were in receipt of pauper relief for a short time. They have now voluntarily gone into the service of a farmer for food and lodging, awaiting indenture, as the local lock-up is not a suitable place for such lads.

(a) The water-supply to the town is at a very low ebb. At the beginning of the year there was a fair quantity of water in the two dams at the top of the town, but these have now been dry for eight months. The town well failed in April, and the Municipal Council made another well on the Market Square. This well gave a good supply of water to October, but then it began to fail also. The old town well was then deepened, and a small quantity of water obtained. At the present time four buckets of water are allowed to every household, irrespective of numbers, and one bucket to every hut. There are many private wells in the town, but the majority are dry, or becoming so.

The water obtained from the wells, both public and private, is very hard, and contains much mineral and vegetable matter.

The water-supply at the present time is insufficient in quantity and bad in quality, and is undoubtedly the cause of the prevalent epidemic of Diarrhoea.

The Municipal Council, recognising the gravity of the situation, invited an engineer to come to Lady Grey to see if the water-supply could be improved. The engineer proposed a large reservoir in the kloof at the top end of the town. This reservoir would contain from 25,000,000 to 30,000,000 gallons of water, and the supply would be unfailing. The water would be of good quality, and entirely free from contamination. The construction of the reservoir would cost about £3,000. Unfortunately, however, the Municipal Council were unable to obtain the necessary loan from the Public Works Department.

Should there not be a heavy rainfall within a short time, the situation will become exceedingly serious, as the supply of water is becoming hourly more inadequate for the needs of the town.

As regards improving the water-supply, no other way is possible except the Kloof Reservoir, as the township is already riddled with wells and bore-holes, and no further supply can be expected from that source.

(b) Sewerage and Drainage.—No alteration has been made during the past year. As there has been no water to flush the street furrows, there has been some difficulty in keeping them clean; but at the present time they are in a fairly satisfactory state.

Owing to the drought, the sluits on the borders of the town, and between the town and the Native Location are in a bad sanitary condition, and the few small showers of rain have rather aggravated than improved their condition, as pools of foul-smelling water have formed in the deeper parts of the sluits. These pools are, however, now mostly dried up.

(c) Disposal of Night-soil, etc.—Each house in the village has a privy in connection with it, and each privy is provided with a sanitary bucket or pail. The privies are kept in good order and are regularly inspected by the Sanitary Inspector. If the pails are defective in any way they are removed and new ones replaced by the Sanitary Inspector at the expense of the householder.

Night-soil is deposited in deep holes, dug in the Commange at the lower end of the town, about 1,000 yards from the nearest house.

Household refuse is removed by the Municipality every ten or fourteen days.

Store and garden refuse must be removed by the owners, and, if not removed by them, the Municipality removes it and charges for the removal.

Slop-water is generally disposed of by being thrown from the back doors into the yards or gardens; the soil is fortunately very absorbent otherwise this practice would be more dangerous than it is.

All backyards are regularly inspected by the Sanitary Inspector and general cleanliness enforced.

As regards the natives at the location two large latrines have been built with separate compartments for males and females near the location; these latrines are kept clean and in good order.

Notwithstanding numerous prosecutions and convictions Natives still use the sluits near the location at night time. This cannot be prevented as there are no night constables; occasional night surprise visits are not sufficient to absolutely prevent the nuisance.

There are other latrines erected at suitable spots for the natives who work in the town during the day time.

(d) Overcrowding does not occur to the extent it did in former years; four cases have been reported during the past year; the landlords of the properties were warned and the overcrowding stopped. At the location overcrowding takes place during shearing season, but the system of residential passes checks this to a great extent.

(e) The slaughter-houses and butcheries are kept in a satisfactory manner, and no complaints have been received concerning them. At both butcheries the proprietors possess good wells which enable them to flush their premises, notwithstanding the scarcity of water.

There are four bakeries in the village, and they are all kept in a clean and sanitary condition.

There is no dairy in town; milk has been very scarce during the year, and the market milk has been sold for eighteenpence the bottle, but the average price has been sixpence per bottle.

(f) The Keeping of Cattle, Swine and other Animals.—Pigs are not allowed to be kept in the village. Many of the inhabitants keep cows for milking, and farmers coming into the village occasionally keep their trek-oxen in kraals for the night. The kraals are kept fairly clean and no complaints have been received concerning them.

Dogs of all sorts are numerous; an official has now been appointed to kill dogs for which no licences have been taken out.

(h) Native Locations.—Early in the past year it was resolved by a general meeting of ratepayers to remove the Native Location from its present position to a site on the further side of the nek, but on account of the great expense involved in the immediate removal of the whole location, it was resolved that as the huts became vacant from disuse or non-payment of hut-tax, they should be destroyed, and that all huts in a dilapidated condition and worthless, should also be destroyed. All new huts to be built on the site on the further side of the nek. This plan, though slow, will eventually cause the total removal of the present location, which will undoubtedly be of great benefit to the town.

The natives are under the control of an Inspector, who keeps good order, and who enforces cleanliness as far as possible.

The location is in a fairly good sanitary condition, but the sluits surrounding the location are in a filthy state from reasons already stated.

The natives are feeling the drought severely, as each hut is only allowed one bucket of water per diem. This is not sufficient for cooking, cleaning, and washing, and consequently the natives have suffered very severely from the epidemic of Gastro-Enteritis, and several deaths have been recorded from that cause. There is one case of Enteric Fever at the location, but the disease was contracted at Naauwpoort.

The bye-law concerning unlicensed dogs should be rigorously enforced, as the number of dogs in the location causes great difficulty in keeping the place clean.

Overcrowding at the Location takes place during the shearing season. At other times cases of overcrowding are rare.

(i) Cemeteries and Burial Grounds within the District.—The European cemetery is well situated and well cared for. The native cemetery is well situated and in such a position that contamination of the water-supply from it is impossible.

(k) The Abatement of Nuisances Generally.—The appointment of a Medical Officer of Health to the Municipality, and of a Sanitary Inspector, and also of the Native Location Inspector by the Municipality has done a great deal towards the abatement of nuisances. Every month there is now an improvement in the sanitary state of the town. But, without a sufficient supply of water, it is impossible to keep the furrows, etc., in as clean a state as they should be.

(l) The Prevention of Disease and Hospital Accommodation.—Compulsory notification of infectious diseases is now enforced. There is no hospital accommodation whatsoever. A small building of two rooms exists on the commonage; it is meant for the reception of people suffering from infectious disease, *e.g.*, Small-pox. The building is now in such a dilapidated condition as to be entirely useless. I would suggest that the Municipality procure two or more tents which would not involve much expense.

In the gaol there is also no hospital accommodation, and, consequently, considerable inconvenience is caused when a prisoner becomes ill.

(m) As already stated at the commencement of my report the general health of the District has been good during the past year. Besides the epidemic of Diarrhœa already mentioned and commented on there have been isolated cases of Enteric Fever, Scarlet Fever, Measles and Whooping Cough, but no deaths have been recorded from these last-mentioned diseases.

At the beginning of February there was one case of Small-pox at the farm Ono in this District.

The patient was a Basuto adult. He contracted the disease in the Dordrecht District, and became ill the same day as he arrived at Ono. The patient was isolated in a cave with a nurse, and a guard placed a short distance away. All the natives on the farm and on the surrounding farms were vaccinated; all the Europeans on the farm and many from surrounding farms were vaccinated. When the patient became convalescent he was thoroughly disinfected, and all his clothes and effects were destroyed. The nurse was also disinfected and his clothes destroyed. The cave was then blocked up.

In the middle of December there was another case of Small-pox at the farm Wepener. The same precautions were taken as in the preceding case. No infection has been reported, and the patient, who is cured, will be released from quarantine on January 12th, 1904.

The total outlay in the case at Ono amounted to £20.

The outlay in the case at Wepener will probably also amount to a little over £20.

6. BARKLY EAST.

DR. A. R. WILHELM, DISTRICT SURGEON.

(a) During the year 1903 the water-supply of Barkly East has shown itself to be insufficient. The supply for the gardens, brought in by a furrow from Groote Vley, was unavailable for irrigation, there simply being no water on account of the drought. The main spring on which the town has depended since its existence for its supply for domestic purposes became so weak that at one time it was feared it would dry up altogether, and only with great difficulty was the most necessary water procured by the various households. The dearth of water was partially alleviated by the Municipality opening up two more springs near the Police Camp. Otherwise the water-supply has remained unchanged. The Municipality ought to undertake some scheme which would make the supply both for domestic and irrigation purposes more reliable.

(b) to (k) No changes have taken place.

(l) The Municipality of Barkly East possessed two buildings of wood and iron construction for isolating native Small-pox cases. The one was completely destroyed during the war, and the other has been damaged to such an extent that it is not fit for use.

(m) Enteric Fever.—Thirteen cases of Enteric Fever were reported in the town of Barkly East, and two in the district. The first case was observed on the 23rd of February and the last on the 19th of October. The number of cases being spread over that period in the following manner:—

February	1 Case.
March	7 Cases.
April	2 Cases.
June	1 Case.
September	1 Case.
October	1 Case.

Of the seven cases in March, six occurred in the location, and what is still more remarkable four of these cases occurred in infants, one of four months, two of six months, and one of fourteen months. One more case occurred in the location, making the total for that locality eight. In the town itself five cases occurred, one in a coloured male, the other four being European adults. Of the latter, three were certainly imported cases, the patients coming infected from other districts. In the district two cases occurred, one at Lanton Hall on the 17th of August, and the other at Carigbaum on the 17th September. The last case is reported to have been infected at Lanton Hall, but the source of infection of the first is unknown. From the village of Rhodes one case of Enteric is reported in a European child of seven years, but the date of the occurrence is not given. In the town of Barkly East one European case, and one native case ended fatally.

Diphtheria was first observed at Lauriston on the 17th of January, and at Rockfield on the 26th of January. No other cases are reported from the country, but in the town nineteen other cases occurred, and were distributed from the 17th of February until the 5th of November over the various months as follows:—

February	3 Cases.
March	6 Cases.
April	3 Cases.
May	4 Cases.
June	2 Cases.
November	1 Case.

One case ended fatally in a European female of thirteen years; most cases though were of a mild type.

Scarlet Fever.—The first case was notified on the 11th March, and the last on October 14th. During that period thirty-two cases were reported in the town and five in the country. Only one native case was notified, and that in the country. One European case in the town, an idiotic child of eight years, terminated fatally. Many more cases of Scarlet Fever occurred, especially in the country, than were notified. These unnotified cases are treated by the parents without medical advice, or if in some cases medical advice is sought, and the first case in the neighbourhood is seen by a medical man, in the rest of the cases the symptoms are described, and only medicine is asked for. In many instances the first case is not even seen, but medicine is asked for, and the case must be prescribed for by the medical man. This class of case which represents the bulk of the country cases naturally is not notified, and what is said of Scarlet Fever holds good with regard to any infectious disease, which runs a mild course. In a small town like Barkly East which possesses no isolation hospital, it is very difficult to isolate Scarlet Fever. So long as the child is laid up the parents will at least make an attempt at isolation, but when the child is convalescent, and desquamating and most infectious, it is very difficult to persuade anyone to take care of them properly. At the height of the epidemic the school was most properly closed, and by the time the school children re-assembled, the epidemic had spent itself.

Small-pox was only seen amongst natives, and in all six cases occurred. At Mount Mourne an adult male native coming from the Quinting was found suffering from the disease on the 16th February, and though isolated on that farm he ran away, and was not traced again. On the 26th February another case, an adult male, also on the road from Basutoland was discovered at Vaalkop and the second case on this farm was the male native attendant to the first case who had the disease in a very mild form, having been successfully vaccinated at the time the first case was discovered. This last case was discharged on the 1st of April. A pre-vaccinated native adult male was found suffering from the disease at Queensberry on the 26th of April, and was discharged on 4th May. A fresh outbreak occurred at Ross Trevor on the 22nd August in a male native child who was discharged on the 14th September. The infection in this instance came from a hut in the tree plantation of Barkly East, where a native just recovered from Small-pox was discovered. On the 19th of September a case of modified Small-pox was discovered in a female native child, who had been successfully vaccinated at the time the last case was found, and this must have been done about the fourth or fifth day after infection; this case was discharged on October 1st. None of the cases ended fatally, and none had been vaccinated before infection. Everything reasonable was done by the Local Authorities, isolation of the sick and vaccination, and re-vaccination being mainly depended upon.

Measles.—Seven cases of Measles were reported in the town over a period from the 27th July until the 1st September. The peculiarity of this outbreak was that it was limited to two neighbouring households, and spread to no other part of the town.

Chicken-pox.—Only three cases of Chicken-pox were notified in the town, the first case on the 15th September and the last on the 5th November. In the country three female European cases were reported from Boschhoek on the 27th September, and on the 27th November five female native cases were reported from Sandham. Three of these last cases occurred in adults, and they created a suspicion of Small-pox.

Erysipelas.—Two cases of Erysipelas were reported in adult female Europeans, one occurring at Barkly East and the other at Rhodes.

Puerperal Fever.—Two cases of Puerperal Fever occurred at Barkly East on the 9th October in the same house, another case had occurred at Lanton Hall, in August, and another in September in Honig Nest Kloof.

Leprosy.—During the year three cases of Leprosy were discovered, the first case being an adult native employed in Barkly East, the second a Hottentot adult female, who certainly had brought forth two children after she had noticed the disease, and the third an adult male European. All cases have been removed to the Leper Asylums. None of these cases have eaten much fish during their lives, and certainly still less “cured” fish of any description.

Scurvy.—A remarkable indirect result of the drought was the number of cases of Scurvy towards the end of the year. In the Europeans they were all seen in the early stages, and were very amenable to treatment. No deaths are notified from this cause during 1903, but I am convinced that several of the uncertified deaths in the Location were due to this cause. In January of 1904 two natives dying suddenly were found on *post-mortem* examination to have died from Scurvy. The rains having commenced in January, fresh milk and vegetables became more plentiful, and Scurvy has disappeared.

7. BARKLY WEST.

(i) BARKLY WEST.

DR. G. A. HEBERDEN, DISTRICT SURGEON.

The general health of the village of Barkly West and that of the District has been very satisfactory during the past year.

There has been no epidemic in the country, and only three cases of Enteric Fever, all among Europeans in the village, and no deaths.

The water-supply of the village is the same as in previous years, and, although the Vaal River has been almost dry, there has been no increase of sickness.

I have no fresh remarks to make in answer to questions from (a) to (k).

(l) There is hospital accommodation for about thirty cases of Contagious Disease, and one hut for Leprosy. There is no infectious diseases hospital.

(m) I have made the usual vaccination tour through the district, with what result it is impossible to say, as I am not allowed a second journey to verify the success or otherwise. There has been about thirty cases of Scurvy along the River Diggings, as far as I am aware, but in all probability many more, as there have been many deaths which have been registered as chest disease, or anything else that may strike the officer who collects these statistics as a convenient expression for the cause of death.

In my opinion, the cause of these outbreaks is due to general innutrition, as they always occur during prolonged drought.

These epidemics have only been frequent and severe since Rinderpest, in fact, since the price of meat has risen, and fresh milk has been almost impossible to procure. I find that they rapidly improve if they are given fresh vegetables (provided that they are not in too advanced a stage) combined with fresh milk and animal food.

(ii). SUB-DISTRICT OF KLIPDAM.

DR. T. L. SHIELDS, ADDITIONAL DISTRICT SURGEON.

(a) The water-supply is from wells in the vicinity of the village, and is fairly good and plentiful. Water is delivered by carts and stored in tanks or casks for use.

There has been no disease traceable to its use during the year.

(b) Sewerage and Drainage.—Nil.

(c) Collection and Disposal of Night-soil, Slop-water, etc.—There is no collection of above. All latrines, etc., which exist are of the nature of cesspits, but many of the houses have no conveniences of any kind, in which cases the occupants utilise the empty claims.

Slop-water, household refuse, etc., is all thrown into the empty claims, and lies there.

(d) Overcrowded Dwellings and Dwellings unfit for Human Habitation.—Although most of the dwellings are of a temporary iron and wood nature, none can be said to come under the above heading.

(e) The slaughter house, butchery and bakery are all clean and well managed.

(f) The sale, storage and preparation of human food are all satisfactorily conducted.

(g) The keeping of cattle, swine and other animals is carried on in a very unsatisfactory manner. They are allowed to feed—especially the swine—in the empty claims which are the depositing sites of all the refuse of the village. At night the cattle are kraaled, and in many cases the kraals are in actual contact with the owner's house, a condition of things which does not tend towards the improvement of the public health.

(h) The order, cleanliness and general sanitation of the native locations compare very favourably with that of the village.

(i) The Cemetery, which previously was quite open and overrun by cattle has this year been walled in by a substantial dressed stone wall. The funds for this purpose were raised locally by a concert and bazaar, and a committee has been appointed to see to the carrying out of this work (which is now almost completed), and also to manage the affairs of the Cemetery generally.

(k) Abatement of Nuisances Generally.—The nuisances existing are those mentioned above; they have existed as long as the village, and seem likely to continue, as the Diggers' Committee died a natural death at the outbreak of the war, and there seems no great desire on the part of the inhabitants to re-establish it.

(l) The Hospital accommodation for infectious diseases is nil.

(m) There was one case of Diphtheria during the year, which terminated fatally on the second day. The patient evidently was infected in the Transvaal, and developed the disease immediately on returning home. The patient was a European child, and the remaining members of the family were isolated and disinfected. The premises were disinfected, and no fresh cases occurred. These steps were taken under the authority of the Assistant Resident Magistrate.

The absence of the General Hospital, which has not yet been reopened, has been very much felt during the past year. Several accidents

have occurred at the local mines, in some of which several natives have been severely injured, in one case seven, and all were cases requiring hospital treatment.

There have also been many cases of sickness, occurring in the families of residents which could be treated satisfactorily only in hospital.

It is to be hoped that the re-opening will not be much longer delayed.

Scurvy, as usual, has been prevalent during the past year. In all, nearly 300 cases were treated in the Scurvy Hospital, with ten deaths; and nearly 400 cases were treated and rationed in their own huts, with seven deaths.

It has been usual in the past to ascribe all cases of scurvy to the use of American meal as the staple article of diet. However, during the past year the 400 cases above-mentioned all occurred in two low-lying locations on the river bank, while the higher locations were comparatively free from the disease.

Again, it is a noticeable fact that one employer may have Scurvy beginning amongst his boys, and affecting them all, or the majority, whilst another employer feeding his boys on the same class of meal may not have a single case of Scurvy amongst his boys.

In many cases babies, breast-fed, were affected, but in all those cases the mothers were also suffering from the disease.

The fact that a generous diet of fresh meat, milk and vegetables soon causes a decided improvement, and eventually effects a cure in the great majority of cases, shows that the disease is one of poverty, or, at least, that the poorly fed are more liable to contract it; but the facts stated above would seem to show that there may be other factors in the causation of the disease besides poor food.

8. BATHURST.

DR. CECIL E. JONES PHILLIPSON, DISTRICT SURGEON.

The sanitary defects of this scattered township are few, and every effort is made to abate nuisances generally by the Municipal Ranger. The demarcated roads are not in many places cleared of their natural growth. This entices householders and visitors to deposit refuse in public places and tends to the annoyance of many. When reports are made the Ranger visits the localities and takes measures for the removal of the refuse, by the offenders or Municipal Authority.

(a) The water-supply is obtained from the rainfall, and is stored in tanks. Boring has been performed in many places but has proved unsuccessful, the water being too "brak" for drinking purposes.

(b) Nil.

(c) Night-soil is buried in suitable places by a contractor. Slop-water, etc., are indifferently disposed of, but instructions are made known by the Municipal Authority that all refuse shall be buried.

(d) Nil.

(e) There are two slaughter-houses, two butcheries and two bakeries, all of which are well kept.

Dairies.—The quality of the milk and means of conveyance has much improved during past two years.

(f) Satisfactory.

(g) Cattle and swine run about the village, but no harm results.

(h) There are two native locations, both being exemplary and under control of Inspector and Ranger.

- (i) Well situated.
 (k) As mentioned in preliminary.
 (l) No Isolation Hospital or Contagious Diseases Hospital exists.
 (m) Typhoid or Enteric.—Three cases occurred, two of which were introduced and the other originated here.

Diphtheria.—There were three cases in the district and one local.

Small-pox.—There were twenty-eight cases in all.

Date.	Locality.	No. of Cases.	Source.
17-5-03.	Kafir Drift	... 8	Port Elizabeth.
31-7-03.	"	... 3	Peddie.
18-7-03.	Shaw Park	... 3	Unknown.
12-8-03.	Walsingham	... 1	King William's Town
30-8-08.	J. E. Hayton's & Orren's	10	" "
10-10-03.	P. Dugmore's	... 1	Unknown.
11-10-03.	Geo. Pittaway's	... 2	Native from Dugmore's

Steps taken in each case:—

- (1) The natives were allowed to live in their huts.
- (2) Certain areas were marked out by means of flags, as infected areas.
- (3) Either the Field-cornets or Guards were appointed to visit and guard them.
- (4) Those too poor to provide for themselves were supplied with provisions by the Divisional Council.
- (5) Disinfectants were supplied.
- (6) District Surgeon appointed to visit locality and supply necessary remedies.
- (7) Authority—Divisional Council Health Board.
- (8) Huts, clothing and utensils burnt, when quarantine was raised.
- (9) Small and large Kaffir blankets distributed to the infected, in lieu of clothing burnt.
- (10) Vaccination was thoroughly performed wherever an outbreak occurred.

Vaccination.—During the year over 3,000 persons were vaccinated, mostly primary, or at least persons bearing no vaccination scars. The results were good.

Leprosy.—Four cases were examined and certified.

9. BEAUFORT WEST.

DR. A. J. WESTBY, DISTRICT SURGEON.

(a) The same as last year, except that owing to the drought there has been a great scarcity of drinking water. Water for irrigation purposes had to be pumped from the fountain in the River Gamka during the last three months. This dried up many wells in the upper part of the town, and certainly lowered the water in all.

(b) The same as usual.

(c) The night-soil is conveyed the same way as reported in last report, and my remarks made in last report and the defects pointed out therein still exist. During the year the Municipality started a covered tank for the removal of bedroom slops. This has proved a great boon to many people, especially those who have houses with small back-yards.

(d) Same as last year.

(e) All clean and well managed.

(f) and (g) Same as last year.

(h) I cannot improve on last year's report. The Location overseer now resides in the Location. This is a step in the right direction as he will be better able to attend to his duties.

(k) Improving.

(l) No hospital accommodation whatever.

(m) There was no Small-pox either in Town or District. During the year two suspicious cases were reported, but were discharged after a couple of days, suffering from Chicken-pox. Enteric or Typhoid Fever has again been somewhat erratic. Thirty-five cases were reported in Municipal area, against eighty-six for previous year. Diphtheria has also much decreased; twenty-one against ninety-five for the previous year. Puerperal Fever one, and Scarlatina one. These figures are very gratifying, especially when one remembers the terrible drought which has prevailed. In rural area there were five cases of Enteric and ten of Diphtheria.

Forty-seven people were vaccinated in the Town. There were only two tours allowed in the District, 279 people being vaccinated; but as no inspection is allowed, I am unable to say with what result.

In last year's report I made some remarks about vaccination, and I would once more draw the attention of the Authorities to them.

The Contagious Diseases Hospital still exists in the same deplorable state.

Nothing has yet been done with regard to a general hospital; we await the grant from Government, *vide* report 1902.

No case of Bubonic Plague has been discovered, nor are there any rats.

10. BEDFORD.

DR. HENRY BARRY, DISTRICT SURGEON.

(a) The water-supply at its origin is pure, but gets polluted in its passage through the furrows, which are kept in a filthy state, and horses and other animals are allowed to drink and walk in the furrows with impunity.

The obvious remedy for preventing the pollution of the water in the township is for the Municipal Authorities to amend the bye-law which allows horses to roam both day and night through the township; but, as many of the Municipal members keep horses, self-interest forbids them from having the said bye-law amended.

(b) There is no system of drainage.

(c) The bucket system has been introduced of late. Slop-water, household and other refuse have to be deposited at certain sites pointed out by the Municipality.

(d) The dwellings are good and not overcrowded.

(e) The slaughter-houses, butcheries, bakeries and dairies are kept in a satisfactory manner.

(g) Cows are kept in kraals during the night, and are driven to the Commonage in the morning.

Swine are seldom kept in town.

(h) The Native Location connected with the town is clean and well regulated.

(i) The cemetery for the town is well kept, and private burial places in the district have never been complained of.

(k) The contamination of the water-supply is the principal nuisance, and it remains unabated.

(l) There is no hospital accommodation for either town or district.

(m) Infectious diseases were not very prevalent during the year.

Typhoid Fever cases were not numerous. Small-pox appeared in two places in the district, but under strict quarantine isolation and vaccination the outbreaks were suppressed.

A vaccination tour was made during the year, but only seventy children were brought for vaccination. The vaccine supplied was good.

11. BREDASDORP.

DR. L. SCHLOSS, ACTING DISTRICT SURGEON.

(a) The water-supply of the village of Bredasdorp is pure at its source, and is conveyed to the town in an open furrow. This furrow is fenced in a few hundred yards, to prevent contamination by cattle and sheep—but it is open to wind-blown pollution, and is overgrown all along its banks with grass, weeds and trees, bringing on a plentiful supply of decomposing vegetable matter.

Napier has a good supply, pure at its source, but much contaminated by surface drainage.

The Moravian Mission Station at Elim has an ample and pure supply, lead by pipes.

(c) About one-third of the houses of Bredasdorp are accommodated with privies, where the bucket system is in use. These vessels are emptied and their contents are buried near the house, as often as it may be found necessary and as somebody may be found willing to do this work. It is strongly to be recommended that the Board of Management should make arrangements that these vessels be carried away at regular times, to be emptied in a trench at least one mile distant from the village.

Household refuse is allowed to accumulate and to scatter about anywhere in the streets and public water-courses. It should be carted away in the same manner as mentioned before. Filth of all sorts, leaves and decomposing matter obstruct the furrows and cause in some places stagnant pools of bad smell.

(d) The houses are mostly built on ample ground, and at a fair distance one from the other, which helps to prevent the spread of disease. No overcrowding or houses unfit for human habitation exist.

(e) and (f) There are no public slaughter-houses. Bread is made in private houses, even when made for sale.

(g) Cattle and other animals are kept in many yards adjoining the houses, and are to be seen running free in the village.

(h) No native Location or camp exists. Many natives are erf-holders, and allowed to live amongst the white people. As they form a great part of the voters for the Board of Management, having no understanding for sanitary institutions, and anxious to avoid any taxation, they succeeded to elect for the Board men of their own standard. No improvement can be expected under the circumstances.

(i) The cemeteries and burial grounds are in good order.

(l) No hospital exists.

(m) A few cases of Enteric, the origin of which could not be traced, occurred during the year. There was one case of Diphtheria. With the exception of an epidemic of Measles in May and June, the most widespread ever seen in the district, and causing a few deaths, the health of the district was good.

The centres of the district were visited for vaccination purposes, and 178 have been vaccinated. As these places are visited only once a year, no estimation can be given how many have been vaccinated with or without success.

12. BRITSTOWN.

(i) BRITSTOWN.

DR. A. H. HOPKINS, DISTRICT SURGEON.

(a), (b), and (c) As formerly.

(d) There is no overcrowding.

(e) As formerly.

(f) Satisfactory.

(g) The bye-laws of the Municipality with regard to the keeping of stock on erven are not rigidly adhered to, but the only objectionable animals are pigs which are kept on one of two premises.

(i) and (k) As formerly.

(l) No isolation hospital exists for the treatment of infectious diseases.

(m) During the year not a single case of Typhoid Fever occurred in the Village, and only one was reported from the district.

On the 21st of August six cases of Diphtheria were discovered in three separate dwelling-houses in Britstown; three cases were convalescent, and three still sick; and owing to the disease not having been seen or reported earlier, a number of fresh cases infected from the first ones, occurred a few days later; and on the 31st December there was still one convalescent case under observation.

Forty persons in all were attacked, and all the cases except five were treated with Anti-diphtheritic Serum.

Four cases terminated fatally, and of these one case was not inoculated at all, and the other three not till the fifth, fourth and third day respectively.

I found the serum most efficacious in preventing the disease, and of twenty children who were in daily contact with others suffering from Diphtheria and who received prophylactic injections (600 to 1,000 units B.W. and Co.'s Serum) not a single one became infected. I was also greatly impressed with the fact that "A child with Diphtheria who has been early inoculated and has made a good recovery is very soon just as susceptible to the disease, as one who has never had Diphtheria." Of a family of five children, all contracted the disease and one died; within three months two of these children caught the disease again from a fresh case, and both children died. Post-diphtheritic symptoms were almost invariably absent in children inoculated before the third day. All cases of Diphtheria were quarantined in their own homes; at first guards were employed, but later these were dispensed with. The total cost of the outbreak till the 31st December, 1903, amounted to £208 0s. 2d., of which amount the Britstown Municipality contributes one-fifth.

The control of the outbreak and quarantine arrangements were undertaken by the Britstown Municipality, advised by me; and I consider that the Local Authority has done all things necessary or possible for the prevention and suppression of the outbreak.

Owing to the severe drought, and the absence of most of the farmers, no vaccination trips were undertaken through the district.

The chief causes of death during the year were as follows:—

Pneumonia and Bronchitis	42
Diarrhœa and Dysentery	22
Accidents	9
Syphilis	4
Phthisis	4

Amongst other duties thirty-seven cases of Syphilis were treated in the Contagious Diseases Hospital with three deaths; twenty-one post-mortem examinations were held; and fifteen sentences of corporal punishment were witnessed.

(ii) SUB-DISTRICT OF DE AAR.

DR. N. C. FITZ-GERALD, ADDITIONAL DISTRICT SURGEON.

(a) Water-supplies.—The water-supplies at De Aar are mainly all being taken from a number of wells scattered all over the town. On the railway ground the water is all pumped up by steam-pumps into tanks, which are hermetically sealed and periodically cleansed. As far as I know the water is pure.

The wells outside the railway are about twenty in number, and there are four wind pumps up, all the others being worked by handpump or rope and bucket, and being in a more or less unfinished condition, cannot be said to be free from contamination as any surface matter, dust, etc., blow into them. Some are finished and properly covered in by a brick wall and wooden cover, and I have no doubt in course of time the others will be similarly dealt with. As a Municipality has not yet been proclaimed and there is no local Management Board, everyone does what he thinks best about his own well.

With regard to the quantity, there has been a great scarcity of water due no doubt to the prolonged drought, as during the year under report no rain has fallen, following on a year during which there were also no rain. In many cases it has been difficult to get water for domestic purposes and hardly any available for ablution purposes. This, of course, applies more particularly to natives. I shall deal with the effect of this on the health, later on in my general remarks.

(b) Sewerage and Drainage.—There is no sewage or drainage system in De Aar. There are sluits which are kept clean, but these are for carrying off storm-water. There is also a large sluit to the east of the railway line, which carries off the water used in washing the engines, but as the engines are not now washed only at De Aar this sluit is dry and clean.

(c) Night-soil, Slop-water, and Refuse.—Night-soil is removed by the Railway Department by mutual agreement with non-railway employees, as this is better done by one body in the present state of the town. It is removed two, three, or more times a week in sanitary carts to a dumping ground more than a mile east of the Railway Camp, and is very satisfactorily done. Slop-water and household and other refuse is received into pails or buckets during the day, and is also removed daily and disposed of in the dumping-ground.

(d) Overcrowded Dwellings, etc.—There are no overcrowded dwellings and no houses unfit for human habitation.

(e) Slaughter-houses, etc.—There are no slaughter-houses proper in De Aar. All slaughtering is done away from the town, and the carcasses brought to the butchery. I may state here that nine-tenths of the meat consumed in De Aar is frozen meat and imported, and, therefore, very little slaughtering takes place.

There are three butcheries, one new one and two improved ones, and are well kept.

A fourth butchery, with Cold Storage Chamber, is on the point of completion and will be a valuable addition to this place.

There is only one bakery here, and it is kept clean and well-managed. Another bakery of a very modern pattern has just started building, and will be greatly appreciated.

There is no dairy at De Aar, and no other trades except storekeeping is carried on here.

(f) There is no fault to be found with the sale, storage and preparation of food. Ice is now obtained in the hot weather daily and fish and other articles of food are preserved.

(g) Cattle, Swine, etc.—Cattle or swine are not kept in De Aar. Swine are kept in an enclosure in the outskirts of the town, but are away from any residences. The only other animals kept in town are horses, donkeys, and dogs.

The stables are well looked after, are healthy and well ventilated. There has been no outbreak of disease amongst horses since the departure of the Repatriation Camp to the Transvaal. The stabling of other animals is quite satisfactory.

(h) Native Locations.—There is one big location in the so-called township of Friedlander, not under railway control, where the condition of affairs is the reverse of satisfactory. Why that is so is as follows:—

At a sale of erven held in De Aar in December, 1902, one of the conditions of sale read as follows:—

No. 13. That immediately after the sale of the lots in question the purchasers shall take steps to form a Village Management or Municipal Board for the management and control of the township and construction of streets.

No. 17 reads: That no purchaser shall be allowed to make any cesspool on his property.

Now, soon after the sale a petition was drawn up, bearing twenty-five signatures of stand-holders, asking to have a Municipality declared. This was forwarded to the proper quarter through the Assistant Resident Magistrate, with the result that in January, 1904 there appeared an advertisement in the "Gazette" stating that it is proposed to proclaim a Municipality, and asking for objections.

Meanwhile a large location has been built on some native erven to the east of the line, and also on some erven to the west of the line—a collection of the usual native hovels.

No latrines whatever are provided; water is taken from pools and anywhere it can be obtained; the natives squat all over the place, and leave their excreta, healthy and unhealthy, all over the place; this in turn dries, our never-failing friend the dust-storm comes along—and we have an average of two a week—and covers up everything with dried and partly dried native excreta, we cannot help eating it in our food, drinking it in water, breathing it in, with the result that there were last year in De Aar 212 deaths in a population of between 3,000 and 3,500. This works out at nearly 80 per 1,000, which is extremely high. Most of these deaths, I think, can be attributed to Gastritis, Gastro-Enteritis, Enteritis and Dysentery, and Diarrhoea, solely the result of partaking of dried excreta. The condition of affairs is still the same; no latrines are on these erven, or in this location; and as I stated in several of my reports to the Assistant Resident Magistrate last year, I anticipate a grave outbreak of illness when the rain comes; nothing short of a flood will cleanse De Aar, and then at the risk of contaminating all the wells not properly closed in.

Order is maintained in the Locations by native constables, etc.

There is no semblance of cleanliness about De Aar, except individual effort here and there; the whole place is littered with stones, paper, tins, iron, and wire, etc., and animal refuse. This is a matter that cannot be allowed to remain any longer unsettled, and if a Municipality cannot be established without delay, I would suggest that the stand-holders be compelled, in terms of their conditions of purchase, to establish a Management Board at once.

(i) Cemeteries and Burial Grounds.—There is only one cemetery proper, and this is in the control of the Railway Department. Another so-called cemetery, but properly speaking a burial ground, is outside the Railway Cemetery, and is not fenced in, and there is no caretaker; natives can bury where they will. In the Railway Cemetery everything is well kept and in good order, but the same cannot be said about the other burial ground. The graves in some instances seem not to be of sufficient depth, and the whole place covered with litter, tins and stones.

(k) Abatement of Nuisances.—These, when reported to the Assistant Resident Magistrate, the Local Authority here, are promptly and speedily dealt with.

(l) Hospital Accommodation, etc.—No special hospital exists in De Aar, for the treatment of infectious disease. A hospital belonging to the Railway Department in De Aar accommodates twelve beds, but this is a general hospital.

When any case of infectious disease arises, a special improvised hospital or tent accommodation has to be erected, sometimes leading to great delay in isolating disease.

(m) Infectious Diseases.—To my knowledge only four cases of Enteric have occurred during 1903. Three of these were treated in the Military Hospital, Naauwpoort, and recovered, the fourth was treated in his own home in De Aar, and died there.

Two cases of Diphtheria came under my immediate observation, and after treatment with anti-toxin, both recovered. I think there were a few other cases amongst natives here.

Small-pox.—One genuine case of Small-pox occurred here in a native who had been previously vaccinated. He recovered. Another case, first reported by me after consultation with two doctors, in a man who previously had Small-pox, was, on further observation, found to be suffering from Amaas. This case also recovered. Strict isolation was adopted in each case, and was under the authority of the Assistant Resident Magistrate, De Aar. Both cases were coloured males.

Vaccination.—There were eighty-seven vaccinations and re-vaccinations performed in 1903, with a success of quite 95 per cent.

Scurvy.—A very large amount of Scurvy prevailed in De Aar during the latter half of 1903. This still continues, and in my opinion is due to the fact that the natives are very poor, get insufficient water, no vegetables, fruit, or fresh meat. In fact, the prevailing conditions are conducive to Scurvy.

A number of cases of Scurvy occurred amongst natives employed on construction on the De Aar-Prieska Railway; this was promptly taken in hand by the Department, and lemon juice provided free. A small Hospital was erected, and the patients given a liberal anti-scorbutic diet, under which they rapidly recovered.

General Remarks.—The condition of affairs at De Aar cannot be said to be satisfactory so far as the part outside the railway is concerned. An abnormally high death-rate, which I can only account for as being due to the prolonged drought, poverty of the natives, absence of sanitation, and frequent dust storms.

I would suggest that until a Municipality be obtained or proclaimed, that pressure be brought to bear on stand-holders, as per Rule 13, Con-

ditions of Sale quoted by me previously in this report, to compel them to form a Management Board for sanitary purposes, water, and general purposes.

The drought seems broken now, as there has been some rain, but nothing like an adequate rain. Good heavy rains will go a long way towards removing the most undesirable state of affairs, as mentioned above; meantime, I would urge the expedition of a Municipality being proclaimed, so as to reach all the points touched upon.

I regret to say there is no mortuary at De Aar, and I have written several times very strongly upon the matter; there were thirty-seven inquests at De Aar last year, mostly on natives, but where a dissection of the body was necessary, this had to be done on the floor in the hovel where the body lay. I feel very strongly on this matter, as now and again a scene is created by relatives objecting to have the body dissected. I trust this matter will also receive early attention.

13. CALEDON.

DR. A. J. ALBERTYN, DISTRICT SURGEON.

I.—Caledon obtains its water-supply from springs in the Swarteberg Mountains. The water is pure, clear, palatable, and brought to the village from the spring fountain for drinking purposes by pipes. At present it is given to the public by means of pumps distributed in various parts of the village.

July of this year will see the abolition of the pump system, and water supplied to the various houses for domestic purposes by pipes. The Municipal Council deserves great credit for this step in the right direction.

A large reservoir containing some 6,000,000 gallons of water is a very great boon to the community. This reservoir receives water from springs in the mountain. The water is carried to the village in open furrows, and distributed for irrigation purposes at regular hours.

II.—(a) Night-soil is disposed of by means of carts, which call at the various houses, and empty buckets in place of full ones are left. The soil is deposited into pits some two miles from the village.

(b) The method generally adopted is that of removing by carts. This applies to household and other refuse as well.

III.—No serious outbreak of any of the specific infectious or Zymotic diseases has occurred during the past year. Typhoid Fever occurs now and again. This exemption is doubtless due to the excellent water-supply and beautiful situation of the village for natural drainage.

There is no hospital save that under the Contagious Diseases Prevention Act.

IV.—The abolition of the pump system in the village referred to under "I."

The Municipal Council has engaged the services of a Sanitary Inspector, who inspects and reports upon overcrowding of dwellings, etc. This answers very well.

V.—Rats are unknown to this district.

VI.—Syphilis is certainly on the decrease. The local hospital for the reception of Syphilitic patients requires to be overhauled. Every means has been taken to see that leprosy patients are either removed or properly isolated.

14. CALVINIA.

DR. J. SMUTS, DISTRICT SURGEON.

- (a) No improvement in the water-supplies.
- (b) to (k) I have nothing to add to reports of former years.
- (l) There is no hospital accommodation for cases of infectious disease.
- (m) I am unable to give all the information asked for, as cases of infectious disease occurring outside the village area are not reported.

(1) This district has not been free from Typhoid Fever since the great epidemic of nine years ago. Thirteen deaths were recorded during the past year—four European adults, one European child, and eight coloured adults.

(2) The outbreak of Diphtheria, that commenced towards the end of 1902, caused forty-five deaths during 1903—one European adult, nine European children, four coloured adults, thirty-one coloured children. As far as I know, no steps were taken to suppress the disease.

15. CAPE.

(i) CAPE TOWN.

There is no District Surgeon for Cape Town. The reports of the Medical Officers of Health for the Municipalities of Cape Town and Green Point and Sea Point will be found under Part II., among the reports of Local Authorities.

(ii) SUB-DISTRICT OF D'URBANYILLE.

DR. L. T. BICCARD, ADDITIONAL DISTRICT SURGEON.

(a) The village and district generally have a good and plentiful supply of pure, fresh water; this supply, in the great majority of cases, is from surface springs, the rest being obtained from artesian wells and galvanised roofs. The Municipal supply is from two springs well protected; from here the water is led away in iron pipes, and distributed from house to house. There is, therefore, no risk of pollution at the source or during transit.

(b) Same as previous year.

(c) No improvement as yet on previous year's report.

(d) No overcrowded dwellings or dwellings unfit for human habitation exist.

(e) Slaughtering is done outside the village, and the butcheries are well kept under supervision of the Divisional Council Inspectors.

(f) There are no complaints as to the sale, storage, or preparation of human food.

(g) Cattle, swine, and other animals, are not allowed to roam on the streets. Pig-sties are kept clean, and manure from horses and cattle used for garden purposes, or removed by the neighbouring farmers.

(h) Nil.

(i) I regret to say that nothing further has been done during the year with regard to the new burial ground mentioned in my report of the previous year.

(k) The new outspan mentioned in last year's report is unfortunately not made much use of, and we therefore still have the old one in the centre of the village as a nuisance and source of danger to public health.

(l) We have no hospital accommodation whatever in the district.

(*m*) During the past year Small-pox broke out at two different centres in the district; in one case the patient was removed to Rentzkie's farm, and the second was isolated at the farm under the supervision of a guard. There was no further spread, and no deaths.

Typhoid only appeared in few isolated cases; and there was only one case of Diphtheria.

(iii) SUB-DISTRICT OF WOODSTOCK.

DR. JOHN HEWAT, DISTRICT SURGEON.

Much has been done in the two districts of Woodstock and Maitland during the year to improve their sanitation. The Municipalities have been always anxious to carry out any suggestions made.

(*a*) The Water-supply of the district is good in quality, but very deficient in quantity—a defect which is a serious one, and should be remedied at once, as not only is the quantity deficient, but the supply is an intermittent one during the summer months.

The Woodstock supply is obtained partly from the Newlands Springs and partly from the Cape Town supply by cast iron pipes, and distributed to the various houses by galvanised or lead leadings.

Many of the recent buildings at Maitland, more especially Yzerplaas, are unable to connect owing to the scarcity of water, which necessitates their obtaining their supply from surface wells. Those wells are liable to contamination, and a source of danger to the public health.

(*b*) and (*c*) No drainage scheme is in vogue. Stercus is collected departmentally and systematically by the two Municipalities. The depositing site for Woodstock is at D'Urban Road flats, and the site for Maitland is on the flats contiguous to the Municipality, a site which is, in my opinion, unsuitable.

(*e*) Slaughtering is not permitted within the municipality. Bakeries, dairies, etc., are systematically inspected and kept in order.

(*i*) Only one cemetery exists in the Woodstock municipal boundaries, namely, the Malay cemetery at Observatory Road.

(*k*) As stated in the previous portion of my report, much is and has been done by the local bodies to lessen nuisances, all cases being dealt with as they arise.

(*m*) Infectious diseases have not been prevalent during the year. All cases are notified, and when notified, are dealt with by the Sanitary Department, who fully report, isolate, disinfect, and take such steps as are considered necessary to prevent spread.

16. CARNARVON.

DR. LEOPOLD KATZ, DISTRICT SURGEON.

The past year will for a long time be remembered in this district, as the drought which visited this part of the country was probably the severest ever experienced in South Africa. The rainfall was very little—only 2·45 inches—with a maximum downpour of ·99 inches in February last. The rainfall during the past four years was:—

1900, 11·47 in.; 1901, 11·65 in.; 1902, 6·57 in.; 1903, 2·45 in.

Although actual cases of starvation did not occur in our Division, the health of the people was certainly much influenced by insufficient and bad food.

(a) Condition of Water-supply.—The drought certainly affected the quantity and quality of the water; some farmers were compelled, owing to want of water, to leave with the rest of their animals for other parts of the country. Others had to deepen their wells considerably to get a sufficient supply, for open water in dams was conspicuous by its absence. In the village, some of the wells had totally dried up, others had to be deepened; but there was always water in sufficient quantity to be had. Very bad indeed was the water-supply at Van Wyk's Vlei—the big dam was totally empty throughout the year—and most of the wells had given out. The sicknesses, however, strange to say, which are popularly attributed to contaminated water—as all kinds of stomachic disorders—Enteric Fever, etc., were less than in other years, although the quality of the water was worse, and less pure than in former years. The only way of lessening the danger arising from the use of polluted water, is, in my opinion, to give strict advice to use boiled water only for drinking purposes. A further help would be the storage of rain-water in proper tanks.

(b) Sewerage and Drainage.—There exists no system here.

(c) Night-soil, etc.—Our system gives satisfaction, the only grievance I have to mention is that household and other refuse is being removed in open wagons, which would be much better done in closed vehicles.

(d) Overcrowded Dwellings.—There are no overcrowded dwelling-houses in this village, but generally most of the huts of the coloured people and a good many houses of Europeans do not comply with the modern hygienic demands as regards the air-space. In any case no house should be allowed to be built which has not capacious rooms, or at least well-ventilated sleeping apartments.

(e) Slaughter-houses, etc.—The existing regulations and bye-laws are never enforced, and every butcher and baker does pretty much as he likes, not caring in the least whether his butchery or bakery gives offence to the public or not, or whether he supplies a wholesome article or not. Meat is carried uncovered through the streets, and often is bedecked with flies and dust.

(f) Sale, etc., of human food.—Fresh meat was often of the poorest quality, and sometimes not obtainable at all, even at the very high prices of 1s. to 1s. 3d. per pound. Fresh milk also was very scarce, at 6d. to 9d. per bottle. There were no other complaints.

(g) Keeping of cattle, etc.—No nuisances worth mentioning.

(h) The Native Location is under Municipal control, and well kept.

(i) Cemeteries.—No change.

(k) The abatement of nuisances.—The bad state of the roads in this district is still the same, even worse, and the cases of premature childbirth mentioned in the past year's report, and attributed to the state of the roads, have been slightly increased.

(l) Hospital accommodation.—There is no proper hospital accommodation in the district for isolation and treatment of cases of infectious diseases. The only thing Local Authorities do, is to provide from case to case, by furnishing tents, foodstuffs, and medical comforts for the patients.

(m) Infectious Diseases.—There were three cases of Small-pox in this district, one of the cases, a coloured boy (who had been working on the railway line), another a European schoolgirl at Kalkfontein, who probably caught the infection at Loxton, the third an elderly European farmer at Kalkgat, who took ill whilst travelling about in the Orange River Colony, probably in the district of Smithfield. All three cases were of a mild character, and recovered completely. From the very start the Municipality and Divisional Council had the above cases well in hand. The first case was discovered on the 12th September, the last on the 21st October, and all the steps

deemed necessary to suppress the disease were taken, as isolation, vaccination, disinfection, etc. These three patients had never been vaccinated before. All contacts were vaccinated at once, and a general public vaccination was immediately carried out in the village and in the infected Field-Cornetcies.

Vaccination was properly carried out in the village; in the district, however, I could not attend to that matter as well as I should like to have done, because a good many farmers had left the district. I only vaccinated once, in April, at Van Wyk's Vlei. In Ward No. 6, there has been no public vaccination since 1900.

Amongst other infectious diseases, Diphtheria was prevalent during the first part of the year, a small epidemic also occurred on the farm Uintjesberg during November last. There were not many cases of Enteric Fever, certainly less than in previous years. Only the farm of Leeuwfontein could be considered a source of infection. One case of Scurvy, imported from Kenhardt District, was treated here. There were many cases of Whooping Cough, Influenza, and *Parotitis Epidemica* (Mumps), the latter often combined with Orchitis. There were no cases of Epidemic Pneumonia, although we sometimes had an unusually high number of cases of Inflammation of the Lungs. There were no cases of Leprosy.

Under the Contagious Diseases Prevention Act of 1885, fourteen persons were treated, but none of them were white people.

Births and Deaths.—

Births: 1900, 185; 1901, 187; 1902, 203; 1903, 189. —
Deaths: 1900, 129; 1901, 114; 1902, 230; 1903, 159.

made up as under:—

European.		Coloured.	
Male.	Female.	Male.	Female
25	19	65	50

of which number the following were children under twelve months:—

European.		Coloured.	
Male.	Female.	Male.	Female
6	3	16	16

There were no serious illnesses amongst Government officials.

17. CATHCART.

DR. W. M. BORCHERDS, DISTRICT SURGEON.

(a) Water-supply.—This has during the last eighteen months been amply provided for by the Local Municipality and the Railway Department; the latter at a cost of £3,000 or more.

The whole course of the water run is now fenced or piped, with drinking troughs for stock at intervals. The supply stored at present date is about 11,000,000 gallons, with a running supply of 60,000 per diem, dropping during drought to 40,000 gallons; but, except at the fountain, nothing is done to secure purity of the water running into the reservoir.

The chemical constituents of the water are good and, but for a little muddiness during the time of rain-storms, it is of excellent quality. In order to eliminate the mud carried down the Town Council are now having a filter bed constructed, which was recommended eight years ago, and plans supplied two years ago.

(b) Sewerage and Drainage.—Nil.

The natural fall of the town is such that when half an inch of rain falls all the accumulated filth is washed down to the ravine. Everyone feels what a relief to the oppression pre-existing has now taken place since the rain. The town is excellently situated for a water-carriage sewerage system at a considerably less cost per annum than that which obtains now, and the only reason I can find for it not being put in force is that the present Councillors are either afraid of anything clean, or as obtains in most places, being the largest landowners, want to keep down the rates and increase the rents.

(c) Night-soil is removed twice weekly at 5s. per month per house.

Slop-water is disposed of at the discretion of the householders.

Household refuse only is removed by the Municipality. Other refuse is left to be disposed of at the discretion of the owner.

(d) With regard to overcrowding, etc., the Local Authorities do not appear to interest themselves in these matters as there are some few places overcrowded, and some unfit for human habitation; but, as either are not reported upon by the Sanitary Inspector, they are not taken notice of.

(e) Trades affecting health.—Although for the past three years preservatives have been used in milk sent to East London, no action has been taken in the matter.

(f) An agency for cold storage has been in existence here for at least eighteen months, but no inspection has been made of it. The food offered for sale is not inspected at all, nor is the slaughtering. Paunches of stock lie in the ravine till rotten, without the butchers, who are responsible for this, being prosecuted. I point this out, because there is a fair number of people who pay licence to the Municipality to make bricks, and who are entitled to good water at least for personal use. As, however, these paunches are deposited within fifty yards above the nearest habitation, drinking water for these must be contaminated, and will lead to dire results. The dwellings themselves are not fit for human habitation, as being dug outs, with a few sods piled up to make them sufficiently high to creep into.

(g) Regulations under this heading are in force, more with the view of making money. The health of the people consequently suffers therefrom, as swine are slaughtered in the village instead of at the slaughter-poles. No shambles have been appointed or inspected.

(h) The location is well-kept and regularly inspected, and as each hut has a square of ground granted for 1s. per month, the lessee ought to do well.

(i) There are two Cemeteries, one for Europeans and one for Natives. The European cemetery is now nearly filled, and a new one has already been laid out.

The Native Cemetery should be enclosed by a fence, and protection given to those buried on the ravine side by a proper masonry bank, as it will not be long before these will be washed out, and present a gruesome sight.

(l) Nil.

18. CERES.

DR. G. C. MUNNIK, DISTRICT SURGEON.

(a) Water-supply.—Great improvement must be recorded. The water is supplied by pipes, is of excellent quality both at source and deli-

very, and will be placed within reach of the poor at a future date. At present the furrow water is a source of danger to the coloured population.

(b) Sewerage and drainage, nil. The river affords the natural drainage.

(c) Night-soil, etc.—The pail system is now employed in the removal of night-soil outside the town, a decided improvement on the old pernicious practice of burial in the garden. The system is carried out in a satisfactory manner by the Local Authority. No provision is made for the Native Locations as yet. It is desirable that they should be brought under similar sanitary control. Household and other refuse are regularly removed by Municipal cart, and slop-water is relegated to the yard.

(d) Overcrowded dwellings, etc.—No further remarks. See last year's report.

(e) Slaughter-houses, butcheries and bakeries are well conducted.

(f) Sale, storage, and preparations of human food.—No remarks.

(g) No complaint can be made about the keeping of cattle, swine, etc.

(h) The general sanitation of the Native Locations calls for strong comment, to which reference has already been made, in regard to the night-soil, over the deposit of which no control is exercised.

(i) Cemeteries and burial grounds are well-appointed.

(k) No remarks.

(l) We have a small hospital or lazaretto owned by the Local Authority, for infectious diseases, capable of accommodating about eight cases. The Caretaker's cottage is dilapidated, and requires immediate attention.

(m) Infectious diseases.—Eleven cases of Typhoid Fever were notified, three of which were brought in from a distant farm for treatment. All were sporadic cases; source of infection is obscure.

Small-pox.—Nil.

Diphtheria.—One case occurred.

Cases of Influenza we have all the year round, mostly uncomplicated. With the exception of epidemics of minor ailments, no other of a grave nature is to be recorded, and the general health of the community was good.

There was a marked absence of Pneumonia.

19. CLANWILLIAM.

DR. ALFRED A. HAYES, DISTRICT SURGEON.

Nothing new has occurred during the last year which will cause this report to differ from previous years.

The only two changes being that a portion of the water furrow, from which Clanwilliam receives its supply of drinking water, has been fenced; and a Municipal scheme has been established for the removal of night-soil and slop-water, etc.

I shall treat of these matters in detail as they occur.

(a) The water-supply continues in the same condition as was reported on last year, except that, as previously mentioned, a portion has been fenced in, and a hindrance to cattle, horses and other animals trespassing in the furrow has thus been effected.

It would be well if this were still further extended, as much of the pollutions occur in the village itself.

I should further recommend the erecting of a small hand-pump, for the purpose of filling a horse trough, which stands at the upper end of the village. At present it is filled by hand by means of buckets, with the result that the edge of the furrow gets continually worn away, and drainage from the street entering the water is the inevitable result.

I believe it is proposed to introduce a scheme for the conveyance of drinking water in pipes, when the funds will permit, and the furrow will then only be used for purposes of irrigation.

(b) Same as last year. Drainage from gaol is unsatisfactory.

(c) Refuse, night-soil, etc., is removed by the Municipal Council in carts specially provided for the purpose, and deposited at a safe distance. This regulation is, however, not compulsory, and those who have gardens prefer to use the refuse for the fertilization of their soil.

(d) None that I know of.

(e) Same as last year.

(f) Satisfactory.

(g) Same as last year.

(h) The Native Location has improved in general cleanliness. Another location has been started about a mile from the village, but this at present only consists of huts.

(i) No change in those previously reported upon.

(k) Generally satisfactory.

(l) None except the Contagious Diseases Hospital under the Resident Magistrate.

(m) The last year has been very free from any infectious diseases. The removal of the Military meant also the disappearance of Enteric Fever. A few cases among the Cape Police occurred until February, 1903. I could not trace the conveyance of the Fever either to milk or water, but I noticed that it was extremely prevalent in places where many horses were kept, as was the case in most of the Military Camps.

I have no doubt that equine and other dejecta form a suitable medium for the cultivation of the germs, and, I believe, that flies play a most important part in its dissemination.

Vaccination was not undertaken this year for reasons stated in last year's report. I think it right, however, to draw the attention of the Authorities to the fact, that it is now some years since the district has been vaccinated. I believe 1900 was the last occasion.

20. COLESBERG.

DR. R. K. TAIT, DISTRICT SURGEON.

The town of Colesberg is situated in a kloof, surrounded by mountains on the north, east, and west. It slopes down from the north to south, and a large sluit runs through the town, and carries away flood-water.

(a) The water-supply is good and sufficient. The fountain is cemented in, and the water is brought into the town through iron pipes, and hydrants are placed at different parts of the town for the use of the inhabitants.

(b) The sluit running through the town takes away any surplus rain-water. There is no sewerage or drainage scheme in use.

(c) Night-soil is taken away by a contractor; slop-water and other refuse, by the carts of the Local Authority.

(d) There is no over-crowding, or dwellings unfit for human habitation.

(e) The slaughter-houses are at the bottom of the town, 300 yards from the nearest houses, and are clean and in good order. The butcheries, bakeries, etc., are also kept in thorough sanitary order.

(f) The sale, storage, and preparation of human food are good. I periodically examine all natives who work therein.

(g) Cattle and other animals are kept in kraals at the outside of the town.

(h) The Location is under the Local Authority, and is situated about 500 yards from the bottom end of the town. It is kept very clean, and is considered one of the best locations in the up country. All sanitary arrangements are thoroughly looked after.

(i) Cemeteries and Burial Grounds.—There are three of these, viz., the town cemetery, the military cemetery, and the native cemetery. The town cemetery is now getting full, and arrangements will be made shortly for a new one, as the town is growing in that direction.

(k) There are no nuisances.

(l) There is a lazaretto three miles out of the town, in Camp Kloof, for cases of Small-pox. It is a zinc building of two rooms, and can accommodate five patients. It belongs to the Local Authority, is splendidly situated, and has an excellent water-supply.

(m) Enteric Fever.—There were two or three cases notified to the Municipality as Typhoid. The district has been very free of this disease. Diphtheria.—No cases occurred during the year.

Small-pox broke out in the Railway Camp, Naauwpoort, on the 31st October, 1902, and was stamped out on the 31st March, 1903. It was supposed to have been brought from Middelburg, *via* Norval's Pont. No deaths from Small-pox occurred in 1903. Every precaution was taken to stamp out the disease, the arrangements being under the Divisional Council.

On the 2nd October, 1903, a case of Small-pox was discovered at Tweeddale, on a goods train. This man was removed at once, and placed in a tent on the veld. His wife was with him, and nursed him. She had had Small-pox previously. This case was discharged cured, and the tent was removed on the 23rd October, 1903.

In the district of Colesberg, for the last two years, the people, white and coloured, have been vaccinated. I consider 98 per cent. are vaccinated.

The total cost incurred in connection with the outbreak of Small-pox is as follows:—

Naauwpoort	371 11 10
Tweeddale	9 12 7
Total	<hr/> 381 4 5 <hr/>

No case of Bubonic Plague occurred in this district, nor are rats prevalent.

21. CRADOCK.

(i) CRADOCK.

DR. P. C. DE WET, DISTRICT SURGEON.

(a) Water-supply.—Pure hard water; insufficient during last twelve months, owing to falling off of spring supply in the severe drought.

(b) Sewerage and Drainage.—Storm drains only in the town.

(c) Night-soil, etc.—Dual system of sanitary tubs. Slop-water removed by tank carts under Municipal control. Refuse also taken away weekly or bi-weekly in carts.

(d) Overcrowded Dwellings, etc.—The Indian Coolies are apt to cause trouble in this respect, and have been warned more than once by the Sanitary Inspector.

(e) Slaughter-houses, etc.—Well managed. The local abbatoir should, however, have a proper and sufficient water-supply for regular daily flushing of the floors.

(g) Keeping of Cattle, etc.—Nothing fresh to add to last year's report.

(h) Native Locations.—The locations are well managed, but should in my opinion, be opened up in certain parts; the huts are too closely crowded on the north side. I should like to see the whole location subdivided into squares of about two to three hundred yards, the huts to be at least ten feet apart. Such a system would immensely facilitate inspection and at the same time promote cleanliness.

(i) Cemeteries.—All new cemeteries are situated about half a mile north of the town, and there is no possibility of contamination.

(k) Abatement of Nuisances.—This work is under the control of the Sanitary Inspector and Medical Officer. Monthly reports are made to the Town Council.

(l) Infectious Disease Accommodation.—One Contagious Disease Hospital for males and females exists, consisting of four wards, and capable of accommodating about sixteen persons.

The Lazaretto has been used for Small-pox only up to the present; it consists of three fair-sized wards. Thirty-five to forty adults can be comfortably treated in this building.

(m) Infectious Disease.—Enteric Fever. In the early and middle part of 1903 a certain number of cases were discovered in the town and district, but in the last quarter the town was almost quite free from Fever.

Diphtheria.—Sporadic cases only occurred, chiefly in the latter months of the year. Four cases were reported in the town.

No cases of Small-pox were seen in the town or district.

(ii) MARAISBURG.

DR. NORMAN POLLOCK, ADDITIONAL DISTRICT SURGEON.

(a) There have been no changes effected in the water-supply of the town during the last year.

(b) There are no sewers. Each street is provided with two furrows, to carry off the rain-water.

(c) Slop-water, night-soil, and household refuse, are collected by the Municipality, and deposited on the veld at a spot selected at a distance from the town.

(d) I do not know of any cases of overcrowding.

(e) There is one bakery in the town, which is fairly well kept, and two butcheries, neither of which has proper provision for keeping meat. In one butchery I found a quantity of most offensive-smelling skins, about seven feet from where the meat is kept.

(f) I do not know of any other instance in which human food is stored or kept for sale with insanitary surroundings.

(g) There is no change as to the keeping of animals.

(h) The cleanliness and general sanitation of the Native Location leaves much to be desired, as there has been no change since last year's report.

(i) The Cemetery is about to be enclosed by the Municipality with an iron railing.

(k) Nil.

(l) There is a small shed in the hands of the Municipality, where some Small-pox cases were housed.

(m) The district has been very free from infectious diseases during the year. There were some cases of Whooping Cough, and Influenza showed itself at uncertain intervals throughout the year. An outbreak of Diphtheria occurred about eighteen miles from the town, in the Tarka District. Some fifteen cases were brought into the town, all of whom were Europeans, three terminating fatally. All the cases were quarantined by the Municipality, who successfully took every precaution to prevent the spread of the disease.

The first case came under observation on the 1st November, and the last was discharged on the 9th December.

The School Committee broke up the School earlier than usual on account of the outbreak.

I think the importation of infectious diseases that are apt to give rise to epidemics should be prohibited.

No special steps have been taken to destroy rats, which are not prevalent except on the veld. I have only seen one rat in the town during the last ten years.

A considerable proportion of deaths were registered as due to Pneumonia, which was prevalent during the winter months.

22. EAST LONDON.

DR. J. BARCROFT ANDERSON, DISTRICT SURGEON.

The white population of the entire district is roughly estimated at nearly 20,000, and the black and coloured at nearly 30,000.

The registered deaths were 234 Europeans, and 587 others, a total of 821, as compared with 804 in 1902, 871 in 1901, and 1,261 in 1900.

The total number of births registered during the year was 575 Europeans, and 799 others, a total of 1,374, as compared with 1,368 in 1902, 1,409 in 1901, and 1,310 in 1900.

The number of houses used as dwellings is steadily increasing—at the end of June they were enumerated and found to be 2,042.

(a) The water-supply has remained unchanged throughout the year, except that the rains have augmented the supply in the Amalinda Reservoir watershed, thus apparently diminishing the quantity of Buffalo River water used in the town. An engineer, on behalf of the East London Municipality, has been for some months surveying with a view to formulating schemes for providing the town with a proper water-supply from either the Keiskama or Kabusie watershed, between which the choice should lie.

(b) I am not aware of any permanent improvement that has been made in the sewers, or sewage disposal during the year. Owing to the manner in which the town is cut up by natural depressions into small areas, and to the fact that almost all rooms are above the general surface of the ground, underground drains should be relatively inexpensive to construct since they need be neither large, nor deeply laid. Earthenware or concrete pipes would probably be sufficient everywhere, except along the existing open sluits where I think large concrete sewers of proper sectional shape should be constructed. As no excavation would be required,

their construction would be relatively cheap. There has as yet been no attempt to treat the fluid sewage in any way; this should ultimately be done biologically.

(c) The collection and disposal of night-soil, slop-water, household and other refuse remains unchanged, the night-soil tubs and dry refuse tubs being emptied about once a week, while most fluid refuse goes into the street gutters. The town is unlikely to undertake an underground sewage scheme before it has made financial provision for a proper water-supply.

(d) The dwellings continue to be very fair in construction, but in most the provision for excluding "ground air" is deficient.

I know of no dwelling with masonry walls which has an impervious floor, such as is compulsory in London, while in most wood and iron houses the galvanised iron is carried down to the ground without being perforated, which latter would be a very simple and inexpensive matter. Notwithstanding the steady addition to the number of dwellings in the town, there appear to be practically no vacant houses; nevertheless there is, I think, less tendency to overcrowding than three years ago. I do not think there is any technical overcrowding in any respectable European house. Apart from the matter of "ground air," such insanitary dwellings as exist in town, are occupied by Kafirs, Indians or coloured persons.

(e) and (f) Further improvement has been made at the slaughter-houses, the blood, manure, and other refuse being now daily carted away and buried at the night-soil pits. The chambers are rather cleaner, but are still used as dwellings by Kafirs, and dogs still have access to the chambers. The pens for animals awaiting slaughter are rather better. During the past year, however, there has been a considerable falling off in the number of animals slaughtered, with a corresponding increase in the consumption of imported meat.

The meat-shops are satisfactory, and there are two cold stores in the town for frozen meat.

Two of the bakers only use mixing machines. Some of the small bake-houses in the town, started by new comers without sufficient capital, are not well kept, and give trouble to the Municipal Sanitary Authorities.

The aerated water factories are satisfactory.

Most of the fresh milk used in the town comes in by train in tins, and as yet none is sold sterilised in bottles.

(g) The keeping of animals remains unchanged.

(h) The Asiatic Municipal Location is excellent in every respect. The West Bank Native Municipal Location, overlooking the river, is frequented by the crews of the ships on Sundays to such an extent that respectable natives do not care to live there; some advantage would result were Europeans excluded from entering Native Locations without a pass. In this location several large bare sheds, without flooring, have been erected by the Harbour Board for native dwellings; these are very inferior to the excellent dormitories which the Harbour Board have just completed for the native convicts. In the East Bank Native Location there has been little change during the year, except that the increasing number of huts, made of refuse tin, gives the place a patchwork appearance.

(i) The cemeteries are unchanged.

(k) Arrangements are nearly completed for watering the streets with salt water from the river. The surface of the streets in the East Bank part of the town has not been quite as good as during the previous year, much soft stone, and clay for binding, having been used.

The various local authorities have been reasonably active in obtaining abatement of any nuisances inside their areas.

(*l*) The only hospital accommodation in the district for infectious diseases is as follows:—(1) The Frere Hospital, where Enteric Fever is treated along with general medical and surgical cases, and (2) the Isolation Camps on the West Bank, where during the past year cases of Plague only were treated. During the preceding year Small-pox cases were treated there. These camps are owned, one by the Government, and one by the Municipality.

There was an outbreak of Varioloid, consisting of three cases, occurring in natives vaccinated prior to exposure to the infection. There were no deaths. The vaccination of eighty-seven, and the re-vaccination of 245 persons, in the immediate vicinity of the outbreak was performed. 1,230 primary and 333 secondary vaccinations were performed in the district during the year, over 1,200 of which were done without any special cost to Government except that of the lymph. The results were generally successful. The outbreak of Varioloid was controlled by the Local Authority, the Divisional Council, and its entire cost was £16 6s. 6d.

The vaccination in the vicinity was paid for by Government and cost £3 15s. exclusive of lymph.

All destruction of rats was conducted under instruction from the Medical Officer of Health for the Colony.

There has been a decrease in the number of cases of Enteric Fever and Scarlatina.

Diphtheria was about the same as in the previous year, a neither prevalent nor fatal disease.

A few cases of Scurvy occurred during the year, probably the result of the bad crops in the hinterland.

Tuberculosis appears to be slightly on the increase amongst natives, probably the result of a wetter year. It has accounted for many more deaths in the district than has Plague. In adults, it chiefly affects the intestine.

23. FORT BEAUFORT.

(*i*) FORT BEAUFORT.

DR. W. DUNCAN MILLER, DISTRICT SURGEON.

The health report for the district of Fort Beaufort, as far as the information asked for under most of the headings indicated, varied little from that of last year. The outstanding feature has been the prevalence of Small-pox. The first outbreak was clearly traceable to two native boys who arrived from Port Elizabeth at their homes on one of the Healdtown Fingo Locations, with the Small-pox eruption well marked. No report of these cases was made until seven or eight fresh cases occurred, and one patient—an old man—had succumbed to the disease. The second outbreak was discovered in August, and was undoubtedly the result of concealment of mild cases of Small-pox in the Locations adjoining the Wezo Location, where the first outbreak occurred. It was not until the contagion had spread to the Locations under the control of the Municipality of Fort Beaufort that the Local Authority was aware that a fresh epidemic existed, and by that time the infection had been widely spread. Details of these outbreaks will be found under the heading (*m*) in this report.

(*a*) The condition of the water-supplies, particularly that of the town, remains as it was in 1902, but a scheme for the better supply of water to the town, including the building of a weir across the Kat River at the intake, and a proposal to substitute iron pipes for the present water furrow

is now under consideration by the Municipal Council, and it is to be hoped that such a scheme will be carried out as will at once insure a constant and full supply of water to the town, and at the same time obviate the present danger of pollution which any system of bringing water five or six miles by open furrow through Commonage necessarily entails.

(b) Sewerage as such does not exist. The natural position of the town is such that surface drainage is fairly good.

(c) There is no thorough system for the collection of night-soil. The Municipal Council now refuses permission to build cesspools when plans for the erection of new buildings are before it, and when the condition of old cesspools is reported to be dangerous to the public health, these are ordered to be cleared out and filled up with earth. But the Municipal Council should, in my opinion, take a step beyond this, and insist on a uniform earth closet system, at the same time introducing some means whereby a regular removal and disposal of night-soil would be secured. The disposal of slop-water, household and other refuse, is left to the owner and tenants of houses within the Municipality, and the Sanitary Inspector reports any cases of accumulation of refuse which he may discover.

(e) An improvement in the management of slaughter-houses and butcheries has been manifest during the past year. Bakeries, dairies, and other trades affecting health have been duly inspected.

(f) The Sale, Storage and Preparation of Human Food.—The attention of the Local Authority has during the past year been called to the condition of meat sold on the public market, and meat has been on several occasions rejected as unfit for human consumption, and, in one instance, in which pork infected with *cysticerci* was exposed for sale, the owner was prosecuted and fined.

(g) The Municipal regulations relating to the keeping of cattle, swine, and other animals are, as far as the town is concerned, quite efficient to prevent any nuisance, if they are carried into effect.

(h) The Inspectors of Native Locations report that the Locations in the district are well conducted. The Medical Officer of Health for the Municipality has several times inspected the Locations on the town commonage and found no cause for complaint.

(i) The Fort Beaufort cemetery is situated outside of and on a lower level than the town. It is managed by a Burial Board, and efficiently looked after. The native cemeteries in some respects are open to objection. They are, as a rule, left uncared for—the graves are sometimes too shallow, and there is danger of a possible contamination of the water-supply. This last objection holds true particularly of the Healdtown Locations, where in two instances the cemeteries are situated on ground above and sloping down towards the water-supply of the Locations.

(k) Prosecutions at the instance of the Municipal Council have been undertaken on several occasions during the year for breach of the Sanitary Regulations. The town employs a Sanitary Inspector, who regularly inspects and reports upon anything which he may consider dangerous to the public health. Attempts are still being made to extirpate the prickly-pear bush, which has been referred to in past reports. One house has been closed during the year as unfit for human habitation, and several huts on the outskirts of the town were destroyed after the late Small-pox epidemic.

(l) No hospital accommodation exists in the district for the isolation and treatment of cases of infectious disease, with the exception of two huts which were erected outside of the town by the Municipal Council when there seemed to be a possibility of the extension of Plague to the town.

(m) Two cases of Enteric Fever and one case of Diphtheria were notified during the year. There have been two distinct epidemics of Small-pox during the year. The first outbreak occurred at Wezo (under the

management of the Healdtown Village Board' and was traced to two native boys who had travelled from Port Elizabeth to their homes on the location, and who on arrival were suffering from the disease in its pustular stage. The first cases were reported on 23rd January, and, as the cases were spread over an isolated section of the location, it was deemed advisable to quarantine the whole section—about forty huts. Guards were appointed and contacts were carefully watched. Twenty-seven cases in all were reported, the last on February 25th. Quarantine was finally removed on 1st April. One death occurred in an adult, unvaccinated. Vaccination of all contacts was carried out by the District Surgeon on the discovery of the outbreak, and thereafter vaccination and re-vaccination of the entire Location. The steps taken for the suppression of the disease were under the authority of the Healdtown Village Board of Management, and the cost of dealing with the outbreak was £43 2s. 6d. The second epidemic extended from August to the end of the year. Seventy-five cases were reported, and the Local Authorities responsible for the steps taken for dealing with the outbreak were:—

Fort Beaufort Municipal Council.
 Fort Beaufort Divisional Council.
 Healdtown Village Board of Management.
 Blinkwater Village Board of Management.

The expenses incurred by each Local Authority were:—

Municipal Council	£156	5	6
Healdtown Village Board of Management	15	17	6
Divisional Council	38	17	6
Blinkwater Village Board of Management...	19	17	6

In each of these cases, as in the Wezo outbreak, I have given the amounts incurred by the Local Authorities for medical expenses only.

During this second epidemic there were four deaths, three being native children, unvaccinated, and one European adult female who had not been re-vaccinated for thirty years.

During the outbreak 1,250 vaccinations and re-vaccinations were made, and the effects of vaccination combined with strict quarantine were most marked in preventing the spread of the disease. In each centre there was practically no spread of the disease where quarantine was enforced and vaccination promptly carried out. As far as could be ascertained only seven or eight out of the total of seventy-five cases reported had ever been vaccinated. The amount of successful vaccination was—including re-vaccination—about seventy per cent. In my opinion the Local Authorities, to the utmost of their power, did everything necessary for the suppression of the outbreaks. The spread of the disease over so large an area I attribute to the unwillingness of the natives to report cases of Small-pox, for fear of the quarantining and isolation which would follow.

(ii) ADELAIDE.

DR. WILLIAM DAVIDSON, ADDITIONAL DISTRICT SURGEON.

(a) Up to the present there is no water-supply for the village, the inhabitants depending for their water on the rainfall which is conserved in tanks, and when this fails they have to fall back on the river water, which in dry seasons is not fit for human consumption. During the year we have had a fair amount of rain, so that water was not so scarce as on

several previous years, and the river water in consequence was of better quality, and this showed itself in a marked degree by the absence of any epidemic of Enteric Fever.

A water scheme has been spoken of for many years past, and at last will be carried through, Government having granted the required amount of money.

(b) No drainage system exists; cesspools receive and conserve excrement and sewerage, and when these cesspools are full, they are in most cases filled in and fresh ones made.

(c) Night-soil and slop-water are in most cases thrown into the cesspools, and household or other refuse is in most cases thrown into a heap in a corner of the yard, and when this accumulates, it is then taken out of the village and deposited at a place set apart for the purpose.

(d) There are no dwellings either overcrowded or unfit for human habitation.

(e) The slaughter-houses are out of town, and can in no way affect the health of the place. The bakeries are conducted in a proper manner, and the milk supply comes from the neighbouring farms.

(f) The sale, storage and preparation of human food are conducted in a proper manner.

(g) Very few cattle or swine are now kept in the village, and those kept do not affect the health of the community.

(h) The Native Location is kept clean and in good order.

(i) The cemeteries are outside the village and can in no way affect it.

(k) The Local Authority has seen that yards are kept clear of refuse.

(l) There is no hospital accommodation in the district.

(m) There have been no cases of Diphtheria or Small-pox in the district during the past year, and only one isolated case of Enteric Fever has come under my notice. Whooping Cough was prevalent amongst the natives a few months ago. A few cases of Scurvy have occurred amongst the natives employed on the railway construction, evidently due to the want of milk and vegetables.

Taking the village and district as a whole, the community have been comparatively free from any infectious disease.

24. FRASERBURG.

(i) FRASERBURG.

DR. P. J. MADER, DISTRICT SURGEON.

(a) The water-supply during the last year has been a question of great moment, owing to the long and protracted drought, consequently a number of inhabitants of the village started water-boring, some of them with very good results. It is now proved beyond question that water is easily obtainable even in the driest seasons at a depth of 50-60 feet, and if this fact could be practically realised, a great want would be supplied during the dry seasons. Government could do a great deal towards encouraging water-boring in this district. For domestic purposes the fountain yielded a sufficient supply during the drought, but the dam, which had been standing dry for upwards of two years, did not allow of any irrigation; and except in a few instances where bore-holes had been sunk and wind-pumps erected, the town suffered greatly from the want of a supply of fresh vegetables, and what was still a greater want, a supply of fresh milk in times of sickness.

The same may be said of the country. A water scheme has been started by the Municipality, which if completed will prove a great boon to the town. Drinking-water when obtained at the source, is pure and uncontaminated, but when obtained from the furrow, which very often is the case, especially by the coloured population, is liable to spread infection.

(b) The drainage of the town is naturally bad and sewerage imperfect, the town lying on a flat. The streets are very badly kept notwithstanding that the best of gravel can be obtained within a stone's throw from anywhere. The Local Authority is greatly to blame in this matter.

(c) The improvements mentioned in my last report in the disposal of night-soil and household refuse continue, which is carried on under the supervision of a sanitary inspector. The poorer class of inhabitants, however, are exceedingly negligent about the cleanliness of their back yards.

A more rigid inspection of some of them is much required and ought to be enforced by the Local Authority.

(d) There are no overcrowded dwellings and dwellings unfit for human habitation.

A number of huts situated in close proximity to the fountain, and which had been frequently condemned by me, have at last been closed up by the Local Authority.

(e) The shambles which were commandeered by the Military have been put in proper order and are again used for slaughter. They are situated at a convenient distance outside of the town, not to prove a nuisance. Butcheries and bakeries are free from inspection, consequently I cannot report on them. There are no dairies or other trades affecting health.

(f) There is no supervision or inspection of the sale, storage, and preparation of human food, from a hygienic point of view.

(g) Sheep and goats are kept in kraals adjoining the shambles. A few swine are kept in back yards, and other animals, to my knowledge, are properly kept except dogs, *i.e.*, mongrels, which are a great nuisance at night.

(h) The Native Location is situated at the north-east end of the town. A number of rude stone huts and "scherms" made of bushes and sacking have lately been added. This was owing to the large number of natives who came flocking into the town during the drought, many being put out of employ on account of the farmers having trekked with their sheep to other districts. The Location is under the control of the Local Authority who lets small plots of ground at a nominal rental for the erection of huts. There is, however, no supervision over the building of huts or ever any inspection afterwards.

(i) and (k) As in former reports.

(l) One cell in the Gaol is set apart for hospital purposes. It is fairly well ventilated and can accommodate two patients. The Contagious Diseases Hospital consists of four rooms, very primitive, three of which are used as wards and the fourth as a mortuary.

There are no means or accommodation whatever provided for the treatment of infectious disease and an infectious diseases hospital is very much required.

During the year thirty-four chronic sick, decrepid and aged paupers have received Government relief, that is a ration of bread, meal, or meat as the individual cases required, being all coloured persons living in the Location, some in scherms or rude huts, they naturally have no comforts in the way of accommodation. A chronic sick hospital for such cases would prove a great boon to them.

(m) Notwithstanding the large mortality of deaths from Diphtheria—twenty-six—registered by the Deputy Registrar of Deaths, very few

came under my treatment. The disease appears to have been prevalent in parts of the Williston district and on the Beaufort West border. Only four cases came under my treatment in the month of April. These were four children of a European family in town, and they were treated with serum (Anti-diphtheritic). They all made a good recovery. It is impossible to account for such a sporadic outbreak. I am unable to report on any other cases.

A few deaths from Enteric are recorded, but none came under my notice.

There was no outbreak of Small-pox. The Local Authorities for town and district have done nothing hitherto for the prevention or suppression of outbreaks of infectious disease.

Epidemic Pneumonia is sometimes rife in the district. The causation appears to be climatic, although the disease sometimes proves highly infectious.

The following deaths from infectious diseases are recorded by the Deputy Registrar of Deaths, viz.:—

Diphtheria	26
Whooping Cough	4
Acute Enteritis	11
Dysentery	2
Pneumonia	18
Enteric	3
Influenza	3

Other deaths recorded are:—

Senile Debility	6
Lock Jaw	1
Convulsions	9
Bronchitis	6
Croup	5
Burning	5
Heart Disease	9
Apoplexy	2
Fractured Skull	1
Suicide	2
Cancer	1
Tuberculosis	8
Marasmus	2
Puerperal	1
Unknown	12

Total number of deaths	<u>137</u>
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Of these 61 were Europeans, 76 Coloured, and 44 came under medical treatment.

The number of births registered are:—

Europeans	129
Coloured	70
	<u>199</u>

(ii) SUB-DISTRICT OF WILLISTON.

No Health Report for Williston can be furnished, there being no Additional District Surgeon in that sub-district.

25. GEORGE.

DR. C. OWEN-SNOW, DISTRICT SURGEON.

The health of the town and district of George has been satisfactory during the year.

(a) The water-supply is as described in previous reports. There is no source of pollution in the water which is laid on in the town.

The open water furrows are not kept as clean as they ought to be.

The water-supply did not fail during the year. The rainfall was 32·03 inches.

(b) There is no sanitary system in the town.

(c) Tub or pail closets are in almost universal use in the town; each householder has the night-soil from his house buried—weekly or more often—in his plot of ground. This primitive method ought, in my opinion, to be changed for a system of removal under Municipal control, especially in view of the fact that many of the inhabitants get their drinking water from the open water furrows in the streets.

The existence in the town of unsanitary cesspits appears to be ignored by our Municipal Authorities; they ought to be done away with without delay.

The disposal of household and other refuse ought, in my opinion, to be dealt with by the Municipal Authorities.

The water furrows at Blanco are not in a sanitary condition.

(d) Overcrowding naturally exists amongst the poorer classes—white and coloured—but not to any very alarming extent.

(e) Slaughter-houses, bakeries, etc., are kept in a fairly satisfactory manner. Cattle are, however, slaughtered at private dwellings.

(f) No butcher's meat has been brought to me to be examined during the past year. Milk for sale is, I believe, satisfactorily stored.

(g) Cattle, horses, and other animals roam about the streets apparently unchecked.

Cattle kraals, stables, and pigsties are not kept in as clean a condition as they should be.

(h) There are no native locations.

(i) The cemeteries are in a fairly satisfactory condition.

(k) No further remarks.

(l) There is no hospital in the true sense of the word; there is an unfurnished building of six rooms near the gaol, used promiscuously to house syphilitics, lunatics, and paupers.

It is, I believe, vested in the Government.

(m) There have been no cases of Small-pox, and only a few isolated cases of Enteric Fever, Scarlet Fever, and Diphtheria.

There has been no epidemic of Scurvy or Epidemic Pneumonia.

There are to my knowledge six Lepers, segregated in the district.

It is impossible to give any vaccination returns, as a second visit to the rural centres is not allowed, and the people in the urban centres do not take the trouble to bring their children for inspection a second time.

Five hundred and sixty-one persons were vaccinated by me during the year.

There have been no cases of Plague, or Plague-infected rodents.

Twenty-one Syphilitic paupers were treated by me during the year.

There were one hundred and forty-one prisoners in the gaol during the year. The prison is a model of cleanliness.

[G. 35—1904.]

26. GLEN GREY.

DR. W. S. PARK, DISTRICT SURGEON.

The general health of the district of Glen Grey during the past year has been good. The number of outbreaks of Small-pox was smaller than for several years, and there were fewer cases of Enteric Fever. Leprosy, on the other hand, is on the increase. Syphilis has greatly decreased, only two cases having been treated under the provisions of the Contagious Diseases Prevention Act, Part 2, 1885.

On the matters mentioned under sections (a) to (l) I have no remarks to make.

(m) Enteric Fever.—Twenty cases came under my notice, both privately and in my public capacity. Of the private cases three were in the town of Lady Frere, and three in the country districts, all of whom recovered. I was called upon to investigate and report on two outbreaks at Rodana and Bolotwa, where the mortality had been great. On account of this, and the fact that there had been cases of Plague in Queenstown about the same time, it had entered into the minds of some people that these outbreaks were outbreaks of Plague also. At Rodana eleven cases had occurred, and among these there were five deaths. They all occurred at one kraal, the first case dying in April and the last in August. I saw only two of the cases, but these two were undoubtedly Enteric, and the descriptions given me of the symptoms of the others lead me to the conclusion that all the cases were cases of Enteric. The outbreak subsided on the death of the last case. The Plague Officer from Queenstown saw the last case with me, but he declined to give an opinion as to the nature of the disease, though he stated to me he could find no signs of Plague.

I have no doubt there were many other cases of Enteric among the natives of the district. I have frequently been asked to supply medicine to natives who, judging from the descriptions given to me of their illness, were in all probability suffering from Enteric. As I never saw these cases I could not of course certify to them.

Small-pox.—In 1902 over forty outbreaks of Small-pox had occurred in the district. During 1903 the number had decreased to twenty-two. Of these the largest outbreak was at Guba, where forty-six cases occurred. The outbreak was in existence for a considerable time before the authorities knew of it. The next largest outbreak was at Nonesi, where there were twenty-one cases, and where also the disease had existed for some time before it was reported. Altogether there were 147 cases, 93 of these being in unvaccinated persons and 54 in those previously vaccinated. There were eight deaths, all in unvaccinated persons. Vaccination was performed only in connection with the suppression of these outbreaks. No general vaccination in the district was performed, although authority to do so was requested but not received. The total cost of suppressing the outbreaks was £359, and everything was done by the Local Authority that could be done.

Leprosy is undoubtedly on the increase. During the year I examined fifteen new cases, and on December 31st I had on my list nine supposed cases still unexamined. Of the new cases examined, many of them were of recent origin. Nineteen cases were removed, and it was found that fifteen had died, but I think several of these died previous to 1903. Immediate steps ought to be taken to have the worst cases removed. When the nineteen left I found among them cases that might have been left in the district under supervision, while very bad cases were left behind.

When accommodation for lepers is very scarce I think it might be left to the District Surgeon to choose the cases that ought to be sent and those that might be allowed to remain for a time.

27. GORDONIA.

DR. EDWARD H. PHILLIPS, DISTRICT SURGEON.

The general health among the white population in this district has been good during the past year.

Owing to the extreme drought, which has practically been unbroken since March, 1900, the native population has suffered extreme privations, and the death-rate amongst them has increased very markedly. For the same reason the crime-list for the year has been considerably larger than in any other year during the last decade.

The numbers on the pauper-roll have also increased by scores. Coloured people, who in former years lived in modest affluence, having lost all their stock in the drought, and not being able to find employment, have now become vagrants. Unable to eke out even an existence by collecting and selling firewood to their more fortunate white brothers and sisters among the villagers, they have at last been forced, in many cases, to apply to Government for assistance.

From the numbers of Bushmen brought in from the back-country it is easy to see that the drought has brought them to starvation also. The trekking of the game to better watered feeding grounds, and the loss of their staple article of diet—the 'Samma—has forced them also to seek pauper rations.

Notwithstanding all the drawbacks of the drought throughout the district generally, and the loss of running water in the Orange River, from which the drinking supply of the village is drawn, there have been no outbreaks of Enteric, Diphtheria, or Small-pox.

Favoured, doubtless, by the lack of rain, we have had no Malaria, and very little so-called "River Fever," during the past year. A few cases of the former have been treated, but all among refugees from the horrors of the Hottentot rebellion in German South-West Africa.

In my report for 1902 I stated that Venereal Disease was greatly on the increase in this district, and that it was almost impossible for the District Surgeon stationed in Upington, either to check the spread of the disease in the outlying parts of his district, or to better the working of "The Contagious Diseases Prevention Act."

During a journey (the first of its kind) undertaken late in December, to the back-country, on Government duties, I was able to verify to a certain extent, the reports which I have been receiving from time to time, about the spread of Contagious Diseases in that part of my district, and I beg to repeat what I said further about the matter in the above-quoted report, viz., that a thorough visitation of the whole district by the District Surgeon (or failing this, the permanent appointment of an Additional District Surgeon at Rietfontein), as well as the erection of a Lock Hospital in Upington, are burning necessities, and the only way to hope to stamp out this loathsome disease thoroughly. With regard to the erection of a Contagious Diseases Hospital here I am given to understand that such an idea has been lately mooted, the Government undertaking to pay half the expenses, the other half to be borne by our Municipality; but of this I know nothing officially, although I earnestly hope that the building will soon become an acknowledged fact.

One case of Leprosy came under observation during the year, but unfortunately the patient died before arrangements could be made to remove him to Robben Island.

Over 230 vaccinations have been performed during the year, in and around the village, mostly among coloured people. The numbers of the lymph used were 3248 and 3250, 13/1/03, and the results were, on the whole, good.

(a) The water-supply for the last few months of the year was derived from (1) stagnant pools in the bed of the otherwise dried-up Orange River, and (2) shallow wells sunk by the margin of the river. Owing to the prompt action of the Municipality in stopping the promiscuous bathing and laundry-washing which go on daily in the river at this time of the year, as soon as the river stopped running the pools of water left kept very fairly suitable for a drinking supply until the river came down again in flood, which it did on December 28th. The water, however, was of a bad odour and brackish, and the inhabitants of the village were urged to boil it, with the result that very little sickness was reported at the time.

Wells, dug in the position indicated, to the depth of a few feet, yielded a sufficient supply of sweet potable water.

The river is now in full flood, and the water-furrow, with all its old short-comings, so often reiterated by me in previous reports, is again our chief water-supply.

(b) Nil.

(c) No steps have been taken up to now to carry out my suggestion under this head in my 1902 report.

(d) No alterations to report since last year.

(e) The butcheries and bakeries in the village, are still kept in good order. There is no dairy in the village.

(f) No complaints under this head.

(g) Nil.

(h) The so-called location remains in the same straggling condition as formerly.

(i) No alteration. The cemetery stands as ever a memorial to the policy of "laissez faire."

(k) General nuisances are kept well in check by the police.

(l) No hospital accommodation, either for infectious diseases or for any other disease or injury, exists either for police, paupers or the general public (*vide* my remarks on the advisability of building a Lock Hospital above, also in my 1902 report).

(m) There have been no epidemics to report.

28. GRAAFF-REINET.

(i) GRAAFF-REINET.

DR. H. C. HUDSON, DISTRICT SURGEON.

(a) The water-supply is pure at its origin in the Sunday's River, about two miles from town, and is brought down in a large covered cement pipe to the entrance of the town where it is allowed to run into open furrows, receiving animal and vegetable impurities in its course, until it reaches brandt dams or reservoirs, where it is stored, the inhabitants getting their supply from the furrows or reservoirs as best they can. As pure water has been brought to the entrance of the town and a reservoir and other waterworks constructed at very considerable outlay, all that is needed to

give the inhabitants a pure water-supply is the employment of pipes; but of this necessary arrangement being made there appears to be no prospect at present.

The pollution of the water occurs in its transit in the open furrows and in the brandt dams. Many people use rain-water—conserved in iron and underground cement tanks—for drinking purposes; the poorer class, however, are unable to afford this luxury and are compelled to drink the furrow water and as a result are the chief sufferers from fevers and gastrointestinal ailments.

(b) There is no system of sewerage or drainage, the furrows on each side of the streets carry off the water when it rains.

(c) The Disposal of Night-soil.—The system in vogue is the cesspool system. In crowded localities it is gradually being superseded by the bucket system. Slop-water is disposed of in several ways, a few houses have pits sunk as a rule within a few yards of the dwelling, the trap being invariably *non est*. Some people use the cesspools for the purpose; others have it thrown out in the yards, or if there is no yard the street is used.

Household and other refuse is removed weekly by the Municipal carts to the outskirts of the town.

(d) Overcrowded Dwellings.—The hire-rooms in town and the houses and huts in the Location are with very few exceptions all overcrowded and without the means of ventilation.

(e) and (f) The slaughter-houses are placed at some distance from town, from which they are separated by the Sunday's River. They are owned by the Municipality, which has framed regulations for their management. There is practically no water-supply, and it is impossible, therefore, to keep them as clean as they should be.

The dairies and bakehouses are under no direct supervision. As far as is known they are owned by respectable people, and I have heard of no complaints against any of them. Milk, however, also comes from the Location and Hare Street—a double row of hire-rooms and the filthiest part of the town—being hawked about and sold by the bottleful. When we remember that adulteration is often practised, most probably with impure furrow water, the danger may be readily inferred.

(g) Cattle, swine and other animals are kept in the yards of several properties, and are under the supervision of the Municipality. In wet weather these become a nuisance.

(h) The location is situated to the north-east of the town on a natural incline, and is well drained. It has increased in size very much the last few years. The chief causes of disease are overcrowding, bad water-supply, and except in the case of the new Municipal hire-rooms, there is no system for the removal of night-soil. The death-rate in coloured children is appalling, and is chiefly due to acute intestinal catarrh.

(i) The burial-grounds in the town and outside are kept in very good order. They are not in too near proximity to dwellings. There is surface drainage which is kept in order. The cemeteries belong to their respective Churches, which have regulations in force as regards the granting of authority for and the manner of carrying out burials.

(m) There were mild cases of Measles, Scarlet Fever, and Enteric during the year. At Pietersberg, six hours from town, there was a severe epidemic of Diphtheria, due probably to the bad water during the drought I made five visits and treated ten cases with antitoxin with satisfactory results in all except two in which the disease was too far advanced.

No vaccination was carried out during the year.

(ii) SUB-DISTRICT OF NEW BETHESDA.

DR. P. A. HOOLE, ADDITIONAL DISTRICT SURGEON.

(a) Gaoler.—Health has been good.

(b) Prisoners.—Fifty-three men and three women have been temporarily confined in this gaol, and with the exception of one man, suffering from valvular disease of the heart, who considerably improved under treatment, their health has been good.

I beg to draw attention to the fact that should an epidemic arise here we have no hospital and absolutely no conveniences for the treatment of such cases, in our local gaol—not even a bedstead—which fact I desire to emphasize.

Vaccination.—As far as I have been able to ascertain, the inhabitants (white and coloured) in this place and vicinity have all been successfully vaccinated by me, therefore for the year 1903 there have been no cases.

(a) In this long-continued drought our water-supply has been both pure and abundant.

(b) Sewerage and Drainage.—We have in reality no sewerage and drainage system.

(c) The Collection and Disposal of Night-soil, etc.—Cess-pits are alone used here, and slop-water, etc., are deposited therein.

(d) On my last visit to the coloured Location I found it in a good sanitary condition, with the exception of one hut, which I condemned.

(e) Slaughter-houses, etc., are conducted in a satisfactory manner.

(g) Owing to my representations, the Municipality have prohibited the keeping of swine in the village.

(i) Regarding the cemetery, I see nothing to complain of.

 29. HANOVER.

DR. JAMES WILSON, DISTRICT SURGEON.

(a) The rainfall in the district of Hanover during the year was only about three and a half inches, in place of a yearly average of fifteen inches, and our water-supply has accordingly suffered severely. The stream has steadily diminished till it is now certainly not more than half its normal strength. I have no reason, however, to doubt its purity at the spring, but a very general outbreak recently of Gastro-Enteritis has made me suspect the possibility of contamination in the covered furrow which conducts the water from the spring to the upper end of the village. I have communicated with the Municipal Council on the subject, and suggested their sending a sample of the water to Cape Town for examination, and, pending the arrival of the report on the analysis, to issue notices advising householders to boil the drinking water. They might also open the covered furrow at several places and satisfy themselves that nothing is going wrong inside.

Some time ago a scheme for opening fresh bore-holes above the village, and having water laid on by pipes through the village was proposed and sanctioned by the householders, but it is now in abeyance, owing to the Municipality being unable for the present to obtain Government support.

Water for irrigation purposes has naturally been very much below the average. When I mention that about 20,000 transplants and trees have died during the year at the Government Plantation, just outside the

village, it will give some idea how severely hit this district has been by the drought.

(b) We have unfortunately not had the surface drainage of the village tested for some time, and, when rain comes, I feel sure it will be found faulty; the roads have become very much worn in places, and it is impossible to do very much in the way of repair while the drought continues.

(c) The Municipal Council has certainly gone ahead during the past year in the matter of disposal of night-soil. There is a weekly removal of every bucket by a contractor employed by the Council. Several of the householders have slop-water hand carts, but the practice is not general, and the Municipality state they are unable to take the matter up. Household and other refuse is collected weekly by the Municipal Contractor.

(d) At the request of the Municipal Council I made a thorough inspection of the dwellings of the coloured people in Hanover. I found much overcrowding at the location, and several huts, that I considered unfit for human habitation, were destroyed. I measured the superficial area and cubic space of each hut, and reckoned out what the maximum number of occupants should be, fixing on a very low minimum per individual. I advised the Council to have this maximum number painted on the door of the hut and to hold the tenant responsible should this number be found to be exceeded. So far the scheme has worked fairly well.

(e) Formerly all meat to be exposed for sale was slaughtered at the shambles well outside the village, but recently I find slaughtering has been carried on in a kraal at the south-west corner of the village, only a few yards from inhabited dwellings. I have protested against this practice to the Municipality, and they have promised to revert to their former rule of having the work done at the shambles only. The butcheries and bakeries in the place are clean. A soda-water manufactory in the village is satisfactorily conducted. Milk is retailed by private individuals only.

(f) I attribute a good deal of the gastric troubles we have had lately to the use of imported meat which the people have perforce to use. Some samples, I have seen exposed for sale at the morning market, look very suspicious.

(g) The Municipality has issued bye-laws regulating the keeping of cattle, swine, and other animals, but they are not very strictly enforced.

(h) Except for the overcrowding which existed and the filthy state of the veld surrounding the location—a condition which still exists—I have no special complaint to make about the Native Location here. It is too close to the village, and the question of its removal to another site has been under the consideration of the Council.

(i) The cemeteries for white and coloured are some distance from the village. Both are vested in the authority of the Dutch Reformed Church. The cemetery for white people is in very bad order at present, but I have the assurance of the Dutch Reformed minister that it will be attended to as soon as rain comes and work is practicable.

(k) Most of the old cesspools have been closed up, and only one or two are in use. The old middens for household refuse are quite done away with. The Municipality generally are more alive to the fact that they have the power to enforce sanitary improvements, and they are will-

ing enough to frame and pass the regulations, but very backward occasionally in seeing them carried out. I do not believe that very much real progress will be made until they have a properly appointed Medical Officer of Health and a Sanitary Inspector, who can see that all their regulations and bye-laws are carried into effect.

(*l*) There is a Contagious Diseases Hospital belonging to the Government near the gaol, but there is no permanent building for the isolation and treatment of infectious diseases elsewhere in the district.

(*m*) Enteric Fever.—A few sporadic cases of Enteric Fever occurred at the beginning of the year, but there was no general outbreak, and no definite cause could be ascertained. As the year drew to a close it re-appeared, and the diminished and probably polluted water-supply leads me to expect a fairly general outbreak of the trouble.

Diphtheria.—On the 5th October at an inquest at Kinkeldraai on the body of a female “poor white,” who had no previous medical attendance, I found the cause of death was Diphtheria; her brother was in extremis from the same trouble, and a sister was also ill. The drinking water they were using was certainly not good, but it is likely they got infected by a relative who visited them the previous week, and who had the same trouble in his home at Richmond. Several more cases occurred in the district later on and two in the village; one case being that of a pauper Kafir child whom the Municipality had quarantined, but afterwards refused to be responsible for his medical treatment. On the other hand the Divisional Council, acting on my suggestion, voted an annual allowance to the District Surgeon to procure four tubes of Diphtheria antitoxin, so that he should always have it fresh on hand, and be able to deal with, and probably check any outbreak of the trouble. I venture to commend this action to the attention of the Government, and should be glad to see its general adoption, especially in outlying districts.

Small-pox.—On the 21st November the death of a coloured woman from Small-pox was reported from Kleinfontein Location. I visited the place the following day and vaccinated all contacts, and had the hut, which stood apart from the others, put in quarantine, guards being sent down to see that no communication was carried on with the other huts. Later on two of the contacts, in one of whom my vaccination had been successful, developed the disease, and two other cases in another hut were discovered. On the 6th December, I revisited the location, and put the whole place under quarantine for fourteen days and vaccinated everyone, 146 in number, ninety-one of whom were over ten years of age, fifty-five under ten, eighty-one males, and sixty-five females; there were thirty-six primary vaccinations. I discovered three other cases that were being concealed. I had all the sick people with their immediate contacts brought together and extra guards appointed, and Dr. Usmar, of Naauwpoort, who subsequently acted for me, re-vaccinated six days later all those who failed to react to my inoculation, forty-three in number. On the 19th December the quarantine ceased and all the people were sent away, except those still sick and their immediate contacts, and their huts were destroyed. At the end of the year five sick people remained with three contacts and the number of guards was reduced.

The source of infection was not ascertained, but the farther spread of the trouble is more easily understood when one considers the obstinate way in which both vaccination is objected to many of these people, and concealment of actual cases is attempted by them. It was only on my threatening to allow no rations to be supplied to anyone refusing to be vaccinated that I was able to get my work completed and to discover the three last cases referred to.

The wonder is, in connection with the outbreak, that it was so limited in extent. Many of the people were employed in Naauwpoort, and the location there with about 1,500 people, is only about half a mile from the seat of the trouble.

The Divisional Council had charge of the epidemic, and, to my mind, did everything in their power to prevent and suppress the outbreak.

I have no doubt that vaccinating all the people in the location and putting them in quarantine checked what might have become a very grave outbreak of Small-pox.

The total cost of the outbreak cannot yet be estimated, but it will be approximately £150. One-fifth of this amount will be paid by the Divisional Council and the remainder, I believe, by Government.

Plague.—There have been no cases of Plague in the district. Some dead rats were found at the Cape Police Station, at Dwaal Siding, in the month of October. I was immediately informed, and I advised that the bodies be sent in a sealed bottle to the Bacteriological Institute, Grahams-town, while the Police Station should be thoroughly disinfected. No more was heard of the matter.

Scurvy.—During the year there were no less than ten cases of Scurvy among the prisoners in the local gaol. I attribute it to the small amount of fresh food allowed, and found it more common when zamp was being used instead of mealies. I found in all cases most satisfactory results from allowing each patient 1 lb. potatoes and 4 oz. lime-juice per diem.

Dagga Smoking.—I should be glad if some means could be adopted to check the habit of dagga smoking among the natives. We have had several instances during the year where this pernicious habit has led to the commission of crime.

30. HAY.

DR. A. BENNETT, DISTRICT SURGEON.

The general health of the district for the past year has been far from good, owing in a great measure to the prolonged and severe drought. In the months of February and March, several cases of Diphtheria came under observation (in the treatment of which Anti-Toxin proved most effective), and Influenza was very prevalent throughout the district during, I may say, the whole year.

No cases of Small-pox were reported during the year, and no persons presented themselves for vaccination.

Five cases were treated under the Contagious Diseases Act, and one case of Leprosy (Tubercular) came under my notice.

Twenty-four natives received pauper relief during the year, the principal reason for their being placed on the pauper roll, being old age and general infirmity.

(a) The water-supply of the town is undoubtedly insufficient; whereas we formerly had two fountains, the "Upper" and the "Lower," we now have only one, the "Lower" fountain having long since become absolutely dry, and the "Upper" fountain, as well as the private wells, considerably weaker; this is, of course, greatly due to the long and very serious drought. The supply from the "Upper" fountain is undoubtedly pure at its source, but being conveyed to the town in open furrows and channels, must necessarily (as I have more than once pointed out in former reports), reach the consumers in a very impure state, and absolutely unfit

for domestic purposes. The remedy is very apparent: convey the water by means of pipes to several points of delivery easily accessible and convenient to the inhabitants.

(b) Sewerage and drainage are unknown quantities.

(c) The disposal of night-soil and refuse is purely a matter for private consideration. Well-to-do inhabitants pay due attention to this matter. In the case of the poorer classes, however, sanitation is in a very unsatisfactory state.

(d) Several new dwelling-houses have been erected during the past few months, and I am not aware of any serious overcrowding.

(e) There are no slaughter-houses in existence. The licensed butchers, of which there are four, have slaughter-poles erected on the outskirts of the village, and the carcasses are conveyed to the butchers' shops, and there cut up and sold. With regard to their shops, I cannot say much for their sanitation; indeed, I doubt very much if some of their owners understand the meaning of the word.

There are three bakeries, all of which are fairly well conducted. The one recently established being run on fairly modern lines.

There are no dairies under the Act, supplies of fresh butter being obtained from outside farmers, who manufacture on their farms, and bring the butter into the town for sale.

(f) Generally satisfactory.

(g) Cattle usually graze on the town commonage during the day, and are kraaled on the outskirts of the town during the night. There are no swine kept in the town so far as I am aware, and horses are generally stabled.

(h) The Location, which I understand is under the management of the Village Management Board, is very far from satisfactory.

(i) The old cemetery, which has long been closed, is in a sadly neglected and filthy condition. The new cemetery at the southern end of the town, is, I am pleased to be able to state, kept in a satisfactory manner.

(k) Little or nothing has been done towards the abatement of nuisances generally.

(l) We have only a Contagious Diseases Hospital, which is under Government control. The building is a wretched, tumble-down affair, totally unfit for the purpose for which it is used, and entirely beyond repair. The building contains four rooms, has a frontage of forty-four feet, the right wing being 17 feet 4 inches wide, and the left wing 16 feet 8 inches.

(m) Infectious Diseases, with the exception of Diphtheria during the early months of the year, and Influenza (*vide* opening paragraph of report), have not been prevalent. Enteric Fever, Bubonic Plague, Scurvy, Epidemic Pneumonia, and diseases of a like nature, have happily not seriously troubled us.

Cases of Diphtheria were treated in their homes, and isolated as far as possible, disinfectants being freely used.

The Local Authorities have done little or nothing in the way of preventing the spread of infectious disease. I may state in conclusion, that the town generally is in a far from satisfactory state from a sanitary point of view.

31. HERBERT.

DR. GEORGE O'TOOLE, DISTRICT SURGEON.

The general health of the district has been, on the whole, good. The most prevalent diseases have been Pnuemonia with Pleurisy, Bronchitis

and Dysentery, all caused, in my opinion, by the great drought, together with the sharp variations in temperature from intense heat to very cold weather, sometimes within a few hours.

(a) The water-supply in Douglas towards the close of the year was exclusively from the public well which has been sunk on the Market-square, the irrigation furrow having been dry, and the Vaal River being so low that it contained only pools of water which quickly became stagnant. One beneficial result from this temporary scarcity of water is that many private wells have been sunk, and the owners will not be dependent on the irrigation furrow for their domestic water supplies.

(b) and (c) Same as last year.

(d) There are a few overcrowded dwellings, but this is caused by the extreme smallness of the houses which are only occupied by one family to each.

(e) Good.

(f), (g), and (h) Satisfactory.

(i) Same as last year. Natives and paupers are buried in a site situated above the English Church burial ground.

(k) Satisfactory.

(l) There is no hospital accommodation in the district for the isolation and treatment of infectious disease. The hospital for the isolation and treatment of contagious disease, having become unfit and unsafe for habitation, had to be closed, and at present there is no accommodation whatever.

(m) There has been no case of Enteric, Diphtheria, or Small-pox in the district during the year.

I have vaccinated thirty-three persons during the year of whom only nineteen were successfully vaccinated.

I would like to mention in this report that, in my opinion, there should be some accommodation provided for the treatment during illness of paupers who are absolutely destitute. The paupers are for the most part very old and feeble, and when they fall sick they are, as a rule, absolutely without attendance of any kind, and are in danger of dying as they lie helpless, being sometimes unable even to move to relieve the wants of nature.

32. HERSCHEL.

DR. THOMAS D. McLAREN, DISTRICT SURGEON.

Regarding the matters specified under the headings (a) to (k) of Circular No. 59, 1903, I have nothing new to report affecting the public health, but would refer to my report for 1902.

(l) No hospital accommodation exists in this district for the isolation or treatment of infectious diseases.

(m) Small-pox.—There have been twenty-four outbreaks of Small-pox (comprising sixty-one cases) in the district during the year. Owing to the scattered nature of the population, none of these have assumed serious proportions. They have originated in the arrival of an infected person from outside the district, and led to a few subsequent cases on the spot. In most cases the attack has been mild, and no deaths have occurred. By employing a few guards, the patients and contacts have been kept from leaving the infected areas for the time being. At my request, the Acting Resident Magistrate has obtained a supply of sulphur cones, to ensure the immediate disinfection of huts in which cases have occurred. This, I

believe, will be the most effectual means of preventing the disease from becoming endemic, but I should like a freer hand, to order the destruction of all the infected clothing and belongings of the patient before his discharge, and beg also to recommend the supply of a suitable disinfectant for bodily use (such as Izal), to be kept in readiness at the offices of the Inspectors of Native Locations.

The prevalence of the disease resembling Scurvy has already been the subject of correspondence with the Government. Within the last few weeks I have seen many cases presenting the same features, viz., a hard swelling of the calves of the legs (usually the first symptoms complained of), softening and swelling of the gums, going on to ulceration, epistaxis, and marked anæmia, with an asthenic condition producing various secondary troubles. In view of the paper entitled "So-called Scurvy in South Africa," read by the Medical Officer of Health for the Colony before the last Medical Congress, it appears to me that an official investigation of the disease is highly desirable, with the object of elucidating its nature. Very few of these natives seek medical advice; most are seen only once, and many merely send a friend to obtain medicine for the symptoms described, so that any observation of the course and termination of the disease is out of the question under the circumstances. The disease appears to be widely spread in the district, and increasing rapidly, so that a fair field is offered for a methodical study of the complaint if the Government consider it expedient.

33. HOPE TOWN.

(i) HOPE TOWN.

DR. J. J. O'REILLY, DISTRICT SURGEON.

(a) The water-supply of the town is very good as it is taken in pipes from source of origin to a dam. This water is running night and day, and what is used for drinking purposes is caught as it comes from the pipe. The dam water is used for irrigating gardens.

The water-supply in the district is from wells worked by windmills.

Notwithstanding the severe drought during the past year the water supplies only sank to about half of the normal flow.

(b) Nothing is known of sewerage in this village.

There is, however, a big sluit at the west end of the town where all rubbish, etc., is thrown. When the rains come the sluit forms a small river, hence all the stuff lying about is carried into the Orange River, some ten minutes distant.

(c) The night-soil is carried away twice weekly by the bucket system. It answers very well.

Household and other refuse go to the sluit on the west of the town, and remain there until the rains come.

(d) This has not come to my notice.

(e) This has not come to my notice either, there being no Medical Officer of Health for the town.

(f) Most of the shops look clean, otherwise I know nothing of their interior, or how they are managed.

(g) The Municipality does not allow any swine or cattle to be kept in stalls in the village.

(h) I know nothing about order, cleanliness, or general sanitation of the Native Location under the Municipality. I have no instructions to visit or report on above locations.

- (i) Cemeteries and burial grounds are clean and well kept.
- (k) Nothing of this kind gives any trouble in these parts.
- (l) There is one hospital for contagious diseases. This is small, badly built, and not at all what a hospital should be. It is more fit to keep animals in than human beings.

There is, I believe, an isolation hospital outside the town, which has been commandeered by the Municipality for the storage of sanitary buckets, etc.

(m) There were three cases of Diphtheria in the town during the year.

Case No. 1 occurred on January 6th, in a boy aged two and a half years. He came from an outside farm, where several people got the disease afterwards. It was proved that a man came from Middelburg, Cape Colony, to visit at this farm, Kaffispan, where he died from the above disease.

This boy died, as he was inoculated rather late, no fresh anti-toxin being obtainable, and, when obtainable, parents refused to have him inoculated.

Some seven people died of this disease at the farm Kaffispan. They were attended by Dr. Gibbons of Prieska.

Case No. 2 occurred in the village on May 2nd, in an elderly man. Nothing could be traced of its origin.

Case No. 3 was a boy who had been suffering from Scarlet Fever for five days and developed Diphtheria also; though very sick he recovered as he was inoculated in time. The origin of Scarlet Fever or Diphtheria could not be traced, as neither were prevalent in the district at the time.

Scarlet Fever was contracted by a young girl twenty years old, who looked after Case No. 3; she did not develop Diphtheria.

These cases cost the Municipality or Government nothing, as they were private cases treated by me.

No cases of Typhoid Fever occurred to my knowledge during the year. I vaccinated some 175 people in the country during the year.

The lymph was most excellent, and as far as I can gather there was not a single failure amongst those primarily vaccinated.

This lymph came from Grahamstown.

Of the 175 vaccinations 170 were primary, five being re-vaccinations.

I saw four cases of Hydatid cysts during the year. Two cases spat up the cysts from lungs, and have gone on well since.

Case No. 3 was in a native's liver, who got quite well on removal of cyst.

Case No. 4 was only discovered on *post-mortem* examination in a coloured girl some seven years old. Right-half of abdomen was filled with a huge cyst which contained hundreds of daughter cysts.

(ii) SUB-DISTRICT OF STRYDENBURG.

DR. JOHN MUIR, ADDITIONAL DISTRICT SURGEON.

A severe drought has prevailed in this district during the year, the total rainfall being slightly over six inches. Milk was so scarce as to interfere seriously with the prospects of recovery in acute diseases, as few people—at most three or four—could afford to feed cows artificially. Fresh meat during the last six months of the year has been a luxury, frozen meat taking its place. The people frequently attribute Gastro-Enteritis to the use of this meat, but I have not been able definitely to confirm this. Certain very necessary articles of diet have therefore been very scarce, but no actual cases of privation have come to my notice.

During January, February, and March, a large number of cases of Malaria prevailed. Typhoid Fever claimed remarkably few victims, there being the smallest number affected in any year since the village was founded. There was one case of Diphtheria, and one of Scarlet Fever. There has been a considerable number of cases of true Dysentery, which, however, all recovered. Phthisis, and other forms of Tuberculosis, seem to be increasing among natives.

During the winter months, Pneumonia was more rife than usual. An epidemic of Chicken-pox lasted for a couple of months, and there were about forty cases. There have been three cases of Erysipelas during the year. Hydatids are not rare in the district, there being an interesting example of the disease in the lung, the patient coughing up a daughter cyst. There was also an Abscess of the Liver, possibly a suppurating Hydatid. Puerperal infections are common, and as many examples are seen here in a year as in a large European Hospital in a lifetime. There has been one fatal accident with a wagon, and one case of accidental gunshot wound.

The duties of the District Surgeon have been light. Only three *post-mortem* examinations have been performed. No vaccinations have been made.

(a) There has been a scarcity of water during the year for other than purely culinary purposes. A number of wells in the village have dried up. Owners of the few trees, that have had a struggling existence in the past, have been compelled in some cases to watch them die from want of water. I have pleasure in at last recording an effort on the part of the Village Management Board to improve the water-supply, which, however, was unfortunately unsuccessful. A well has been dug at the top of the village, from which it was hoped water could be supplied by gravity to all parts of it. An insufficient quantity was found, and the scheme had to be abandoned.

(b) and (c) As regards sewerage, there is nothing new to report. Night-soil, etc., is removed by cart at night, and buried some distance from the village. There is no further attempt at sanitation, which is of the most primitive description. An efficient earth-closet system has not yet been introduced. Heaps of ashes, empty tins, and other rubbish lie on many of the open spaces and back yards, and I have heard of no action being taken by the Authorities.

(d) There are no overcrowded dwellings, or houses unfit for human habitation.

(e) The butcheries have been closed some time, owing to the scarcity of slaughter sheep. The bakery is conducted in a satisfactory manner.

(f) There is nothing to report regarding this matter.

(g) The condition of affairs under this heading is unexceptional. Very few pigs are kept here, and no piggeries are permitted to adjoin the public streets. Very few cows and no cattle have been kept within the precincts of the village during the last year, for reasons already stated.

(h) The state of the location is unsatisfactory. There is no water-supply within half-a-mile. There are no houses in the proper sense, merely shelters made of paraffine tins and sacking, but not uninhabitable from a native point of view. There is no sanitation whatever. Fortunately, however, the location is a long way from the village. The indications for improvement here are so obvious, that it is unnecessary to specify them.

(i) The cemeteries are under the control of the Dutch Reformed Church, and are properly looked after. If a hearse were obtained, it would conduce somewhat to decency when funerals take place. The coffins of

adults are placed diagonally across a barrow, and wheeled to the grave. I have seen the coffin of a baby wheeled in a perambulator.

(*k*) As regards the abatement of nuisances and possible improvements generally, the same suggestions hold good which are contained in the Annual Health Reports for several years back. It is unnecessary to go over the ground again.

(*l*) There is no hospital accommodation here for the isolation and treatment of infectious disease. Tents would be obtained from the Civil Commissioner and Resident Magistrate, Hopetown, if required.

(*m*) As regards the presence of infectious disease, especially Enteric Fever and Diphtheria, I have made a statement above. All infectious and contagious diseases are notifiable. No action, however, has ever, to my knowledge, been taken by the Local Authority on such notification. In my opinion, it is quite a useless formality to report such cases.

The record of deaths during the past year has been so loosely kept, that it is impossible to draw up statistics.

34. HUMANSDORP.

DR. JOHN J. COULTON, DISTRICT SURGEON.

(*a*) The water-supply for the village of Humansdorp is obtained from a good, strong, never-failing spring situated about four miles from and 150 feet above the village, and is led through an open furrow into the village, and then in open furrows along the streets. There is little chance of its being polluted on its way across the common, and the sluits in the village are kept as clean as possible. The Municipality are considering a scheme for masoning out the sluits, which will be a great improvement, and I think will render the supply as good as it can be for the size of the place.

(*b*) Sewerage and Drainage.—Nil. Waste water is thrown out on the land behind the houses, which in most cases is used as garden land.

(*c*) Since the beginning of 1902, a good pail system has been established by the Municipality. This has worked well. The excreta is buried some miles from the village on the common.

(*d*) Nil. Any case as it arises is dealt with by the Municipality at once.

(*e*) No slaughtering is allowed in the village. There is one slaughter-house on the common, which is kept in a good state, but most of the meat sold in the village is killed on the farms just outside the village, and the slaughter-houses are not under the control of the Municipality. Bakeries are kept clean, and in good order.

(*f*) Nothing objectionable on this head.

(*g*) No more than six head of cattle are allowed to be kept in any erf in the village, and wherever this number has proved a nuisance, the Municipality has compelled its abatement. Very few pigs are kept in the village.

(*h*) A new Location was laid out by the Municipality at a very suitable spot half-a-mile below the village, where it cannot become a nuisance.

The Municipality do all in their power to get fair houses built by the natives, but there are at present too many huts of a construction not fit for any human being to inhabit. Any steps taken to improve the village location are largely hampered by the establishment at Kruisfontein, four miles off, of a location of low-class huts under practically no control. This is the more to be regretted, as the rest of the village of Kruisfontein is composed of very fairly-built and well-kept houses inhabited by natives.

(i) The cemetery is well-kept, and so situated as to render it impossible that it should ever become a nuisance.

(k) The Municipality look well after this, and take prompt action when any nuisance is brought to their notice.

(l) On the discovery of a case of Small-pox in the district, the Divisional Council and the Municipality jointly erected an iron building in a kloof near a stream of water some half-mile from the town. It consists of two rooms, each 12 by 12, and eight feet high. It cost £48, and can hold six or eight patients when required.

(m) There has been no case of Typhoid or Diphtheria in the district during the year. On the 12th of December, 1902, a case of Small-pox was reported from Hankey. On investigation, it proved to be a severe case of Confluent Small-pox. The patient, a Hottentot, had been removed the day before from a gang of boys working on the new railway in Uitenhage District to Hankey, as he was said to be suffering from Measles. The house, which was a fairly isolated one, was at once put under strict quarantine, with all the inmates (three adults and eight children). Vaccination was carried out thoroughly throughout Hankey. The man recovered, and there was no further spread of the disease. All bedding and clothing in the house was burned and replaced, and the house was thoroughly disinfected. The total cost was about £72. The Village Management Board and all concerned worked well and loyally with me, in trying to limit the spread of the disease.

On the 20th of April, it was reported that there was a native with a suspicious rash sitting on the roadside about four miles outside Humansdorp. I proceeded there, and found him with the rash of Small-pox fully out. We procured an old tent, and moving him on to the village common isolated him at once. Next day a meeting of the Municipality and such members of the District Council as could be got together at such short notice was held, and on my recommendation they decided to build an iron hospital on the Town Commonage at an isolated spot near water some half-mile from the town, at a cost of £48. This was put up in twenty-four hours. It consisted of two rooms opening into each other 12 x 12 and 8 feet high, on olive wood poles one foot clear of the ground, and floored with wood. The patient was at once moved into it, and a tent pitched near it for the man who had to look after him (I was fortunate enough to get the man who had recovered at Hankey); and a hut some 200 yards off for the guards. As it was found that the patient had come up from Port Elizabeth in a waggon with twelve other coloured people who had gone on to Snyklip, the police were sent out and the waggon and people were at once brought in, vaccinated, and placed on the common under observation for twelve days. There was no further case, and the patient made a good recovery. Just before he was discharged on May 23rd the Resident Magistrate received a report that three Fingoes had been seen on the road going to Snyklip, who were obviously very sick, and the same day one from the Headman of Snyklip of three people having arrived there from Port Elizabeth with a suspicious rash on them. I at once proceeded to Snyklip, which is a large native location in Zitzikamma, some thirty miles from Humansdorp, and I there found two male and two female Fingoes with the eruption of Small-pox fully out on them. They were at once removed to a waggon, and next morning I burned two of the huts, which were wattle and daub, with a good deal of forage in them, among which the patients had been lying. The fourth case being in a good stone hut, I had it thoroughly disinfected. The four patients were then removed to Humansdorp, and there placed in the Hospital. They all recovered. They had all left Port Elizabeth two days before they were found, and must have been ill when they left.

On June 30th a native with Small-pox was found on the Market Square. He was one of a gang who, with two waggons, were proceeding from Uitenhage District to Storms River, in the employ of the Public Works Department. The patient was sent to the hospital, and the rest of the men with the waggons sent back to Uitenhage District. He had been vaccinated when an infant, and there was one fair scar. He had the disease very mildly, and made a good recovery.

On the same day, June 30th, owing to a report of illness there I proceeded to the farm of Spitzback on Gamtoos River, some seventeen miles from Humansdorp. I there found in two huts one child recovering, one child dead, one old woman dying, and one child and one boy sickening for Small-pox. These had been reported to the owner of the farm before as cases of Measles, and it was only when the old woman got very bad that he made personal investigation, and at once reported the cases to me. The huts with all their inhabitants (thirteen in number) were placed under quarantine, and everyone on Spitzback and the adjoining farm at once vaccinated. Four days later, on receipt of lymph from Graham's Town, the whole of the farms lying contiguous to Uitenhage District were thoroughly vaccinated. There can be no doubt that this case was brought from Port Elizabeth. The father of the child first attacked was a wagon-driver, and returned from Port Elizabeth just twelve days before the child got sick. The others took it from this child.

There was one more case, a woman; in which case rash came out three days after the maturation of the vaccination vesicles. She had a very mild attack, and there was no further spread. On the liberation of the patients from quarantine all the clothing in the huts was burned and replaced with new. The huts were also burned, the owner, Mr. Gordon, claiming nothing for them.

In all these cases I had every assistance from the Municipality and District Council, as well as from the owners of the farms concerned. The greatest assistance was rendered by the Resident Magistrate, who visited all the outbreaks with me to see that everything was done that I wished. I attribute the non-spreading of any of these five outbreaks to the fact that all clothing capable of carrying infection was destroyed by fire. As the clothing was in each case replaced there was no dissatisfaction shown by any of the natives, who were left quite content, and I am sure would not have hidden any further outbreak.

The cost of the two first outbreaks was borne by the Divisional Council, and amounted to £117 4s. 10d. They also had to pay for the Spitzback outbreak, £40 5s. 5d. Outbreak No. 3 came under the Municipality, and cost them £30 15s. 10d.

Vaccination was freely carried out, and besides that done by myself I distributed nearly 1,000 tubes of lymph among the farmers in the district, but am unable to say how many were used by them.

There were 251 deaths registered during the year, 39 European and 212 Coloured. Of these 77 are from Consumption, viz., 33 in the district, 23 in Hankey, 3 in Humansdorp, 10 in Kruisfontein, and 4 in Clarkson. Other diseases of the chest account for 45 deaths, so that 122, or nearly the half of the deaths in the district are from chest complaints.

Fifty-six children are registered as dying from Convulsions and Teething, 34 in the district and 22 in Hankey.

There were 546 births registered, 183 Europeans and 363 Coloured. Of these, 2 Europeans and 83 Coloured were registered as illegitimate.

35. JANSENVILLE.

DR. P. J. HENDERSON, DISTRICT SURGEON.

(a) My remarks of last year still hold good here with regard to both supplies, but nothing seems to be done towards giving us a steady water-supply. The Town Council complain of want of funds, and the idea of a water rate is a thing that they do not seem even to care about discussing. The town collecting cistern leaks badly when there is a good supply—or rather overflows—and when the wind continues the windmill breaks down. I have heard it said that if the pipe from the windmill was raised at its source, water could be pumped, without more than the present force being required, up to the dam beside the English Church, and if that is the case it seems to me to be a solution to the whole matter, and that too, without any great expense being incurred.

(b) No remarks.

(c) This according to the Sanitary Inspector is not carried out by the contractor as it should be, but I believe the matter is now before the Town Council and is receiving their careful attention.

(d) No remarks.

(e) The Town Council are now discussing the question of having one slaughter-house under their own control, and if funds will run to it, this is a necessary and wise thing for them to carry out; as if all one hears is true, the methods used at present are not good, nor are butchers the only persons who kill animals in this dorp for food purposes.

(f) and (g) No remarks.

(h) The Locations are, as far as I can make out, free from smell, but they often look untidy and much rubbish lies about them. They have, as I said last year, no water-supply at all.

(i) No remarks.

(k) Pigeons have almost disappeared from the roofs of our houses now since the Town Council ordered the shooting or penning up of them.

(l) The framework of the wood and sacking Small-pox Hospital belonging to the Municipality still remains intact, it as at present constructed can only hold twenty natives, but its enlargement is easy.

(m) There have been very few cases of Typhoid, Diphtheria, or other infectious disease, except Small-pox, and of such cases we had one hundred and three.

In the Municipal area there were forty-four cases, only one being a European and only seven being pre-vaccinated. No deaths occurred.

In the Divisional Council area there were fifty-nine cases, nine being Europeans, twenty-four pre-vaccinated, three coloured deaths, and all in the unvaccinated class. My remarks of last year hold good as to treatment, etc., and I would only say that this district is now well vaccinated, as since I came here I have made a vaccination tour, vaccinated wherever there has been an outbreak, and during the year performed seven hundred vaccinations in this dorp alone.

It is my belief that Small-pox is present on many farms unknown to the tenant or owner, and that even though cases are isolated and otherwise cared for, infection is carried from one farm to another and that strict measures should be taken to avoid such dangerous practises.

36. KENHARDT.

DR. J. R. SINTON, DISTRICT SURGEON.

(a) The water-supplies of the village and district generally are bad. The village water-supply is taken from open wells, in or near the Hartebeeste River bed. The water is brack and bad. The wells are of the "shallow" variety, unlined or lined with loose stones, or other material allowing contamination of the water by percolation. The wells being uncovered, all kinds of filth can, and does find its way into them. There is a good and sufficient water-supply on the Government Farm, Driekop, and it is reported that the water-supply remained eminently satisfactory with a water-supply for the village. Some time ago (before the war) a considerable amount of money was expended on the Driekop Water Scheme, but for some reason the work was stopped. In the public interest the work should be resumed and brought to a finish at once. This supply has been well tested, both as regards quantity and quality. During the war a large number of men, horses, and small stock were stationed at Driekop, and it is reported that the water-supply remained eminently satisfactory in every respect.

(b) Sewerage and drainage are nil.

(c) A few of the people have the night-soil collected by the hard labour prisoners. There is no organised method of disposing of slop-water or household and other refuse.

(d) None of the dwellings can be described as unfit for human habitation, and dwellings which seem overcrowded can hardly be termed so, when it is considered that the people spend most of their time, both day and night, in the open air.

(e) There are no slaughter-houses. The animals required are killed at the slaughter poles outside the village. The slaughter poles and vicinity are kept clean. There is one butchery in the village; it is kept in a fairly satisfactory condition.

Bakeries are satisfactory. There are no dairies.

(f) The sale, storage and preparation of human food are carried out under satisfactory sanitary conditions.

(g) All animals in the village are kept under sanitary conditions.

(h) The Camp of Natives near the village is under the control of the Government. It is kept in order and fairly clean. There are no sanitary conveniences.

(i) The cemetery is kept in good order, and in a good sanitary condition.

(k) The abatement of nuisances generally is satisfactory.

(l) A Contagious Diseases Hospital exists for the isolation and treatment of contagious diseases.

In every respect it is as bad as it could be. Its situation is just above the village water-supply. It is quite within the village, the nearest houses being less than fifty yards distant. The Gaol is only about one hundred yards distant. The prevailing winds blow from the hospital to the village. The hospital is entirely too small, being about fourteen feet by fifty-eight feet. It is not enclosed in any way. The roof is made of bushes which let the rain through. It is impossible to disinfect the place without burning it down. It is a source of danger to the public, and should be destroyed. It belongs to Government, and is at present filled with Beri Beri patients.

(m) Enteric Fever.—Twelve cases of Enteric Fever are known to have occurred during the year. No situation was particularly visited, and the cases were fairly evenly spread over the twelve months—the months of

lightest incidence being October, November, and December. Adults principally were attacked, and the disease was fairly divided between Europeans and Coloured.

There were four deaths from Enteric, viz., three European adults and one coloured child. The origin of the disease is untraceable. Many cases probably occurred which were not reported.

Diphtheria.—Five cases are known to have occurred through their having been reported, but I am certain that *very* many cases were not reported. The disease was very widely spread over the district, and prevailed all through the year. Only five deaths are attributed to the disease, viz., one European adult, one coloured adult, and three European children.

No steps were taken by any local authority to isolate any of the cases of infectious disease. The Local Authority has *not* done all things necessary or possible for preventing or suppressing outbreaks of infectious disease. The Contagious Diseases Hospital, which belongs to the Government, is a disgrace to any civilised community. No cases of Small-pox have occurred, neither have any cases of Bubonic Plague. I understand there are no rats and very few mice in the district.

Vaccination.—With the exception of prisoners in the Gaol, I believe there have been no vaccinations during the year.

Scurvy.—This disease has prevailed at the Local Gaol during the year, there being nineteen cases with ten deaths. In my opinion the Scurvy was due to confinement and overcrowding in Gaol with want of fresh meat or vegetables. The disease was very virulent and did not yield to treatment.

Beri Beri.—Fifteen cases of Beri Beri have occurred at the Gaol. These cases nearly all began as Scurvy, but soon took on the characters of Beri Beri. I believe the number should be increased by including some of the above Scurvy cases. The Beri Beri outbreak was checked by removing all the prisoners from the infected cell. The cell was then thoroughly disinfected by removing the plaster right down to the bricks and scraping the beams and roof. The walls, beams, and roof were then washed with pure dip, and the floor flooded with the same. Afterwards the walls, beams, and roof were washed with hot lime mixed with dip. When the place was thoroughly dry some prisoners were placed in the cell. In a few weeks two of them developed undoubted Beri Beri. They were all at once removed to the only place possible, viz., the Contagious Hospital above referred to. The infected cell is not at present in use, but if a few more prisoners come in, it must be used. The Gaol has been entirely condemned many times during the past three or four years. A site for a new Gaol has been selected and plans prepared a long time ago, but apparently that is all that is going to be done. The sickness and death-rate in the present Gaol are terrible.

Owing to want of a proper hospital, the working of "The Contagious Diseases Prevention Act, 1885" cannot be thoroughly carried out.

There are no lepers known in the district. The total number of persons who have received pauper relief from Government during the year has been fifty-seven. The number on the pauper roll for the month of December being thirty-five.

The sanitation of the district is not satisfactory. I do not know a single farm possessing a privy or other sanitary convenience. The same state of affairs prevails at the Labour Colony, Kakamas. Diphtheria and Fever have been very prevalent there during the year,

37. KIMBERLEY.

DR. WILLIAM W. STONEY, DISTRICT SURGEON.

Considering matters relating to the health of the order suggested in the Colonial Office Circular No. 59, 1903, I have little to add in regard to the first ten sections, which deal with water-supplies and general sanitary matters, to my report for the year 1902. As I there pointed out, there is a Medical Officer of Health for this district whose whole time is occupied in investigating, dealing with, and reporting upon these matters, which he does extensively and in detail.

(a) With regard to the water-supply it should be recorded that owing to the abnormally prolonged drought, the Vaal River at the intake, was lower than at any time known since the installation of the waterworks, and it became necessary to issue notices drawing attention to the necessity for strict economy in the use of water.

(h) Regarding Locations.—Nothing has yet been done towards the removal of Location III., which, as pointed out in my last report, is in the vicinity of the waterworks reservoirs.

There has been a large number of deaths in the locations adjoining the township of Beaconsfield—Green Point and Vleuter's Locations. This matter is being considered and investigated by Dr. Turner, the recently appointed Medical Officer of Health.

The Refugee and Military Camps and Hospitals gradually disappeared from the vicinity of Kimberley and Beaconsfield, and from Modder River during the early months of the year.

(l) The question is asked: "What hospital accommodation exists for the isolation and treatment of cases of infectious disease?" With the exception of a lazaretto, under the control of the Board of Health, used for the special purpose of isolating Small-pox patients, there is no Infectious Diseases Hospital. This has been a long-felt need urged by successive Medical Officers of Health for the district, but, as yet, in vain.

(m) Infectious Diseases.—The following table gives the number of cases which have been notified to the Board of Health during the year:—

	Europeans.	Coloured.	Total.
Small-pox	3	2	5
Enteric Fever	59	35	94
Diphtheria	7	1	8
Scarlet Fever	12	3	15

Small-pox.—On March 10th an adult European female, who had arrived in Kimberley from Graaff-Reinet ten days before, was found to be suffering from Small-pox. She was removed to the lazaretto. Fourteen days later a child of the patient and two coloured friends were found to be suffering from this disease. In all 23 persons were isolated. No further case occurred, and the last case was discharged on May 14th.

On August 10th a European infant who had arrived from Fort Beaufort three days before was found to be suffering from Small-pox. Prompt isolation, together with three contacts, prevented the disease from spreading.

I attribute the prevention of the spreading of this disease, and the practical freedom of the district during the last few years, to the prompt isolation and surveillance of all cases, even suspicious ones; and to the effort which has been made to keep the district thoroughly well vaccinated.

Vaccination.—During the year 6,347 persons were vaccinated by me, which is somewhat less than last year. Most of these were done during the cool months of the year, when the vaccine lymph gives better results. The lymph obtained from the Graham's Town Institute has been satisfactory.

Enteric Fever.—There was a marked decrease in the number of cases notified during the year, as the accompanying table shows:—

Year.	Europeans.	Coloured.	Total.
1898 (from February 19th)	67	49	116
1899	112	60	172
1900	552	164	716
1901 (excluding Refugee Camp) ...	84	87	171
1902	68	84	152
1903	59	35	94

Diphtheria.—There has also been a marked decrease in this disease.

Year.	Europeans.	Coloured.	Total.
1898 (from February 19th)	21	6	27
1899	34	17	51
1900	27	5	32
1901 (excluding Refugee Camp) ...	16	2	18
1902	15	5	20
1903	7	1	8

Scarlet Fever.—The number of cases of this disease notified remains a low figure, and the disease in recent years has been of a mild type.

Year.	Europeans.	Coloured.	Total.
1898 (from February 19th)	28	7	35
1899	77	5	82
1900	56	9	65
1901	25	6	31
1902	10	1	11
1903	12	3	15

Erysipelas.—This disease, of a severe type, was prevalent during the year, but, as it is not a notifiable disease under the Public Health Act, it is not possible to give accurate numbers.

The Board of Health rented a small house in which destitute cases were lodged, and offered disinfection when cases were reported; but no efficient measures can be enforced until the disease is proclaimed a compulsory notifiable one, which should be done by Government.

Contagious Diseases.—There has been a considerable decrease in the number of cases admitted to the Contagious Diseases Wards of the Hospital, viz., 199, as compared with the year 1902, in which 355 cases were admitted. I trust this really means a diminution of these horrible diseases, but this is a matter difficult to prove. During the year substantial new wards of brick with granolithic floors have been built for male patients, at a cost of £3,500, providing accommodation for seventeen European and fifty Coloured patients.

Plans have also been considered and passed, and tenders called for a new block of Female Wards, estimated to cost about £1,800, and to make provision for eight European, sixteen coloured and six children.

The up-keep of these wards is provided for by the Government paying to the Hospital Board three shillings a day for coloured and four shillings and sixpence a day for white patients. The patients are admitted after obtaining the necessary certificates from the District Surgeon relating to the disease, and from the Resident Magistrate regarding their state of destitution. After that the District Surgeon ceases to be responsible either for their treatment or discharge from Hospital.

From statistics prepared from the ward records, it appears that some cases have been in for very long periods, one actually over two years, and another over a year. It would appear to me that such cases should be removed to a chronic sick hospital, where most probably they could be treated at less expense to the Government.

The following table gives particulars of the number of cases under treatment in the Contagious Diseases Wards during the year:—

	Europeans.		Coloured.		Total.
	Male.	Female.	Male.	Female.	
Remaining under treatment, Dec.31, 02	6	...	33	7	46
Admitted, 1903	19	4	121	55	199
Remaining under treatment, Dec.31/03	8	...	25	4	37

Leprosy.—During the year seven cases have been certified, all males, one European, and six coloured. Again I would draw attention to the delay there is before these cases are removed, and the necessity there is for some proper provision being made for their isolation pending the arrival of the Governor's warrant for their removal. Some arrangement should be made between the Government and the Local Health Authority (the Board of Health), as provided for in C.O. Circular 34 of 1898.

Lunacy.—During the year 32 persons were certified in this district as persons of unsound mind, classified as follows:—

Europeans.		Coloured.		Total.
Males.	Females.	Males.	Females.	
7	2	20	3	32

This is nineteen less than the number certified in 1902, yet the difficulty regarding their removal to asylums has been greater.

Of the thirty-two no less than twenty-eight were lodged in the Gaol, and of these nineteen, that is about two-thirds of the cases, spent no less than fifty-five days, in other words an average of almost two months, in the gaol before removal.

This from a point of view of administration can be called nothing less than absolutely disgraceful. For the last two years I have been putting in special reports and urging the prompt removal of these patients to the only suitable places for their proper treatment, namely, asylums.

In my last Annual Report I summarised the cases and reiterated, what I had frequently pointed out, that it is most essential that these cases of acute mental disorder should in the early stages, when recovery can be most hopefully expected, be placed where mental quietude and rest can be ensured and suitable nursing provided. Generally speaking, the ordinary life in a prison does not provide these soothing influences, but rather produces the opposite effect, especially when half a dozen lunatics are confined within its walls at the same time, as has happened in the local gaol during the past year.

In Section 48, "Health," of the Convict and Prison Code, I notice the following sound advice regarding lunatics:—"Prolonged detention in a prison is a matter which from the points of view both of humanity and prison administration should by every reasonable means be avoided." This regulation appears to be more honoured in the breach than the observance, as regards detention of lunatics in our local gaol.

In addition to the above, twenty-two persons (six Europeans and sixteen coloured) were confined in the gaol for observation regarding their

mental condition, but proved to be of sound mind; some were suffering from acute alcoholism, others from excessive dagga smoking, and others from the effects of witchcraft.

38. KING WILLIAM'S TOWN.

(i) KING WILLIAM'S TOWN.

DR. HENRY M. CHUTE, DISTRICT SURGEON.

(a) Water-Supply.—The rainfall during the year has been 27·57 inches; the number of days on which rain fell was 101. The reservoirs have always been full, and there has been no need for limiting the supply, as so often happens in times of drought.

I am glad to be able to report that during the year, the scheme for permanently increasing the supply of the town, has been accomplished. Pipes have been laid to the storage dam at Ballassi, and connected with the service main. This renders available a very large body of water, and it is believed that there will in the future be no probability of the town being put on limited and short service. The cost of this scheme has been £10,000.

One of the most important immediate results of this, will be that the Native Locations of Tsolo and Ginsberg will at once be provided with water from the mains, and will remove a very serious defect in the sanitation of these Locations, for hitherto the source of the water-supply has been from rivers, at this point subject to much pollution, or from a water-furrow, which in times of drought, yielded a very insufficient and unsatisfactory supply.

I look forward confidently to an improved state of health, and a lighter death rate resulting from this important step. The Council are fully aware of the great need of adding filter and settling tanks, as after rain the water becomes much discoloured, and as soon as finances will allow, this addition will be undertaken.

(b) Sewerage and Drainage.—The drainage scheme initiated some years ago, is being year by year steadily carried on. Most of the streets are now laid with good stone drains and moulded concrete channels, which deal effectively with washing and bath-water, and also storm-water. The increased water-supply will enable a regular flushing of drains to be made, and will minimise the ills arising from the only method now available of the disposal of slop-water, viz., by pouring it into the open drains. To remove the evils entirely, a system of removal of urine and dangerous slops must be instituted.

The improvement caused by the conversion of the Fleet Ditch, formerly an open sewer, into a well-built stone drain with concrete invert, is most remarkable, and has removed entirely one of the most serious sanitary defects of the town.

(c) It is still in my opinion necessary that a system of removal of urine and kitchen slops should be undertaken by the Council. The soil of back yards is constantly fouled by the method of disposal by scattering them on the ground, which is the only one available. This continual fouling of the ground in the immediate neighbourhood of dwellings is, I believe, responsible for a great amount of illness, particularly such diseases as Enteric Fever and Diarrhoea, from which there is such a high mortality.

The system of night-soil removal works admirably, and is so good as to be considered worthy of adoption in other Colonial towns. It is I

believe, for a town of under 10,000 inhabitants, as good a system as can be. There is no nuisance, and the system is well carried out. The plantation of timber trees at the sanitary trenches, where the night-soil is deposited, continues to thrive, and is year by year becoming a more valuable asset.

(*d*) Overcrowding.—There are many houses in town where natives are allowed to live in communities, and overcrowding undoubtedly exists. So long as natives are allowed to reside in the town, overcrowding cannot be prevented entirely. Surprise night visits are made from time to time and prosecutions are made.

(*e*) Slaughter Houses.—No alteration or improvement has yet been made in the condition of the slaughter-houses, and much improvement is needed. The Council have under consideration a scheme for building a central abattoir. Until this is done no material improvement can be hoped for. Frequent inspections are made and cleanliness enforced.

(*h*) Locations.—There are three Locations under Municipal control. The oldest, "Brownlee Station," needs much reform. The huts and houses are overcrowded, and too close together; the Location is not laid out in streets with open spaces, but the huts are built here and there irregularly. The difficulties of keeping the ground clean and free from rubbish are thereby much increased and in many respects sanitation is very defective. The new Location, "Ginsberg's," affords an admirable contrast. It is laid out on a definite plan, with regular streets and intervals between the huts. The huts are built by and leased by the Council to the occupants. Each hut is large, 17 feet in diameter, and has allotted to it a piece of ground 40 x 60 feet. Thirty more huts have been built during the year, making now eighty in all, and the huts are occupied as soon as built. It is hoped that as this Location grows upon this plan, it will provide for the native people, better and healthier habitations, and will drive them from the old Locations. This new Location will now be supplied with a service of water from the town mains.

(*i*) There is one cemetery common to all classes, creeds, and colour. It is situated favourably, so that no drainage can affect the river water, and is admirably managed by a Burial Board.

(*k*) The abatement of nuisances is dealt with by the frequent inspection of the town by a Sanitary Inspector, who is well qualified and most zealous and efficient. Prosecutions of flagrant breaches of the Sanitary bye-laws are often undertaken.

(*m*) Unfortunately during the past year, 1903, the town has been visited with a very serious epidemic of Bubonic Plague, which was introduced by infected rats infesting grain and produce, brought in railway trucks from Buffalo Harbour, where Plague-infected rats were known to have existed for many months.

The first case occurred among Railway employees at the Goods Shed. One native died at Tsolo Location, and two Europeans were affected with the minor form of the complaint, and recovered. The Medical Officer of Health for the Colony visited the town, and organised the vigorous measures that were immediately instituted for coping with it. The epidemic lasted from March until June, and there were 32 cases, with 15 deaths. Of these 32 cases, 20 were Europeans, with 5 deaths, and 12 were natives, with 10 deaths.

The cases were not only from the town, but included those in the district of King William's Town. Natives working at infected places in town and dying in the outlying locations are also included. These do not appear in the Mortality Tables appended, which account for only those dying in the town or town Locations.

Vigorous measures were adopted. Anywhere in the town where infected rats were found thorough disinfection of premises, and particularly

the ground, was carried out, and rat furrows were drenched and saturated with a strong solution (1 in 600) of Corrosive Sublimate. These operations were conducted in March, April, May and June.

Inoculation with Haffkine's Prophylactic was extensively undertaken, both among Europeans and natives, and a war of extermination was waged against rats with remarkable success, as in April and May very few could be found anywhere in town. Coincidentally with these measures the epidemic declined.

It is a curious and remarkable fact that during the months succeeding these disinfecting operations, there was a remarkable diminution in the number of cases of Enteric Fever in the town. During the months of June, July, August, September, and October only eight cases in all occurred.

This affords, I think, evidence that the cause of Enteric Fever here is soil pollution, and not water or food contamination, as, owing to the thorough and extensive disinfecting operations, the nature of which was, before disturbing the dust and earth in infected places, that of saturating the soil with strong Perchloride Solution, the organisms of such infectious diseases as Plague and Enteric were destroyed.

During the year Small-pox appeared among natives in five or six Locations, but the disease was in a very mild form, and isolation of the patients and vaccination of the Location people very soon controlled it.

Appended is a Mortality Table of causes of all deaths of Europeans and Coloured, during the year 1903; also a table of Notification of Infectious Diseases classified into monthly periods and race.

TABLE OF MORTALITY OF KING WILLIAM'S TOWN, JANUARY TO DECEMBER, 1903.

Including Europeans from Town and Hospital. Natives from Town, Hospital, Brownlee Station, Tsolo, Ginsberg, and Bidhli Locations, compiled from Register of Deputy Registrar of Births and Deaths.

	EUROPEAN—TOWN AND HOSPITAL.										NATIVES. TOWN.—Brown- lee Station ; Tsolo and Bidhli Locations. Numbers at different ages.					
	Numbers at Different Ages.															
	Infancy.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	Over 70.	Total.	Infancy.	Childhood.	Adults.	Total.	Grand Total.
CLASS I.—DISEASES DUE TO SPECIFIC ORGANISMS.																
SUB-CLASS.— <i>Zymotic Diseases.</i>																
Influenza											0	1			1	1
Whooping Cough											0	4	1		5	5
Diphtheria and Membranous Croup	1	1									2	5	3		8	10
Typhoid or Enteric Fever				3	4						7		1	1	2	9
Bubonic Plague					3		1				4			2	2	6
Diarrhœa	11	3									14	8	6	2	16	30
Dysentery		1									1		2	1	3	4
Tuberculosis											0					
a Phthisis (Pulmonary Consump- tion)					4	4	1		1		10		15	15	25	25
Syphilis											0	3			3	3
Erysipelas Cellulitis											0		1		1	1
Fœtanus	1										1				0	1
											39			56	95	95
CLASS II.— <i>Dietetic Diseases and Chronic Poisons.</i>																
Alcoholism								1			1				0	1
											1					1
CLASS III.— <i>Constitutional Diseases.</i>																
Cancer							1		1	2	4		1		1	5
											4				1	5
CLASS IV.— <i>Developmental Defects and Degeneration.</i>																
Premature Birth	3										3	7			7	10
Accidents during Birth											6	2			2	2
Old Age										4	4		1		1	5
Congenital Debility	4										4	5			5	9
											11				15	26
CLASS V.—LOCAL DISEASES.																
SUB-CLASS I.— <i>Diseases of Nervous System.</i>																
Convulsions		1		1							2	5	2		7	9
Epilepsy				1							1	0		1	1	2
Cerebral tumour						1					1	0			0	1
Meningitis							1				1	2	1	3	4	4
Apoplexy									3	1	4	0			0	4
Spinal Sclerosis											0	0		1	1	1
<i>Diseases of Circulatory System—</i>											9				12	21
Heart Disease				2				1	1		4		3		3	7
Aneurism									1		1				0	1
<i>Diseases of Respiratory System—</i>											5				3	8
Bronchitis		2					1		1		4	5	4	2	11	15
Asthma											0	0		1	1	1
Pneumonia		1	1	1	1		1				4	3	2	9	14	19
<i>Diseases of Alimentary Canal—</i>											9				26	35
Hernia							1				1				0	1
Enteritis		2	2								4	2		2	4	8
Peritonitis											0		1		1	1
Gastritis											0		2		2	2
<i>Diseases of Liver—</i>											5				7	12
Cirrhosis		1					1				2		3		3	5
Abscess								1			1				0	1
<i>Disease of Urinary Organs—</i>											5				3	6
Nephritis								2			2				0	2
<i>Diseases of Parturition—</i>											2				2	2
Post-Partum Peritonitis					1						1				0	1
Puerperal Convulsions					1						1				0	1
Post-Partum Hæmorrhage											0		1		1	1
Protracted Labour											0		1		1	1
<i>Violence—</i>											2				2	4
Burns		1	1								2		4		4	6
Crushed Chest—Wagon											0		1		1	1
Drowning											0		1		1	1
<i>Suicide—</i>											2				6	8
Hanging						1					1				0	1
Gunshot Wound							1				1				0	1
<i>Undefined—</i>											2				0	2
Natural Causes											0		1		1	1
TOTAL	25	10	3	7	14	5	8	7	6	9	94	52	21	59	132	226

SUMMARY FOR 1903.

During the year—

Burials in Public Cemetery
In Cemeteries of Tsolo, Bidhli's
and Ginsberg Locations

Total 226

Of these

Europeans. Natives.

94 132

At various ages. Europeans. Natives.

Infancy 1 & under 25 52

1 to 5 ... 10 { 21

5 to 10 ... 3 {

10 to 20 ... 7 {

20 to 30 ... 14 {

30 to 40 ... 5 { 59

40 to 50 ... 8 {

50 to 60 ... 7 {

60 to 70 ... 6 {

Over 70 ... 9 {

94 132 226

Causes of Death.

Europ. Nat. Tl.

Class I—Zymotic Diseases 39 56 95

Class II—Dietetic Diseases
& Chronic Poisons 1 0 1

Class III—Constitutional
Diseases... 4 1 5

Class IV—Developmental
Diseases and De-
generation ... 11 15 26

Class V—Local Diseases—
Diseases of—

Nervous System ... 9 12 21

Circulatory System ... 5 3 8

Respiratory " ... 9 26 35

Alimentary Canal ... 5 7 12

Liver ... 3 3 6

Urinary System ... 2 0 2

Parturition ... 2 2 4

Violence ... 2 6 8

Suicide ... 2 0 2

Undefined ... 0 1 1

94 132 226

POPULATION.

European Returns by Cen-
sus, April 5th, 1901... 4,870

Approximate Estimate of
Increase ... 1,130

6,000

Natives and Coloured—

In Town ... 700

In Brownlee, Ridsdel,
Tsolo, Ginsberg and
Bidhli's Locations ... 2,340

3,040

9,040

DEATH RATE PER 1,000.

1903. 1902.

Europeans ... 15.66 15.33

Natives ... 43.42 50.32

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In Cemeteries of Tsolo, Bidhli's
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TABLE OF MORTALITY OF KING WILLIAM'S TOWN, JANUARY TO DECEMBER,
1903.—*Continued.*

NO. OF DEATHS PER MONTH.			Jan.	Feb.	March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.		
Europeans	...	...	5	10	6	9	14	5	10	3	6	9	6	11	94	Total.
Natives	...	...	12	16	16	6	10	8	10	9	7	11	17	10	122	Total.
Total	...	...	17	26	22	15	24	13	20	12	13	20	23	21	226	Total.

NOTIFICATIONS OF INFECTIOUS DISEASES, 1903, CLASSIFIED INTO
MONTHLY PERIODS AND RACE.

DISEASE.		JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEP.		OCT.		NOV.		DEC.		TOTAL.	
		White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.	White.	Coloured.
Enteric Fever	...	6	...	13	...	5	...	9	1	5	1	1	...	3	1	...	1	1	...	1	...	6	...	6	1	56	5
Scarlet Fever...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...
Diphtheria	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...
Bubonic Plague	...	...	...	...	...	3	2	5	6	8	3	4	1	...	...	...	...	...	...	...	...	...	...	...	...	20	12
		6	0	14	0	8	2	15	7	15	4	5	1	4	1	0	1	1	0	1	0	6	0	6	1	81	17

METEOROLOGICAL OBSERVATIONS TAKEN BY DR. C. J. EGAN,
KING WILLIAMS TOWN, 1903.

Lat. $32^{\circ} 52' S.$ Long. $27^{\circ} 23' E.$ Height above Sea, 1,314 feet. Distance from Sea, 30 Miles.

1903.			JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.		
BAROMETER.																
Highest ...	...	...	28·91	29·00	28·96	29·19	29·00	29·21	29·25	29·02	29·18	29·08	29·00	28·90		
Lowest ...	...	...	28·23	28·48	28·41	28·54	28·52	28·48	28·52	28·52	28·15	28·48	28·53	28·50		
THERMOMETER.																
Highest ...	...	...	101	106	95	95	85	83	80	87	100	100	92	104		
Lowest ...	...	...	47	51·5	41	37	36	32	32	35	34	35	44	50		
Mean ...	...	...	72·2	73·6	67·7	62·7	58	55	56·7	57·9	53	63·3	65·5	70·6		
RANGE IN 24 HOURS.																
Greatest Range	...	...	41	39	38	33	40	39	46	40	45	50	35	44		
Least Range ...	...	...	7	10	7	3	4	12	11	9	12	7	9	9		
Mean Range ...	...	...	25·3	31·2	23·2	18·7	26·5	27·3	26·8	25·4	30·5	23·2	18·2	23·3		
RAINFALL.																
Amount in inches	...	...	0·83	1·42	2·87	6·70	3·33	0·50	0·37	1·60	0·22	1·95	5·52	2·26	27·57	Total Rainfall.
Days of Rain ...	...	...	10	10	12	13	7	4	2	7	3	9	16	8	101	Days rain fell.

(ii) KEISKAMA HOEK.

DR. D. C. McARTHUR, ADDITIONAL DISTRICT SURGEON.

(a) During the year, the lock-up and Police barracks have been supplied with water by means of boreholes. The depth in both places was about 160 feet, each hole giving 12,000 gallons per diem of very good drinking water. I had occasion to recommend this being done, as both places were dependent on rain water tanks, and open water furrow, and it is therefore pleasing to note the prompt action taken in the matter. Apart from this there is no improvement in the condition of water-supplies reported last year. There appears to be some probability of the East London Municipality obtaining a water-supply from this district. Surveys have been carried out during the year, and the site favoured for a reservoir is about six miles above the village of Keiskama Hoek, and this would take water from the streams Cata and Muyameni. It is to be hoped that should the scheme be carried through, the village will benefit, by having pipes laid for water-supply, instead of the present open furrow, liable to constant pollution, as reported last year. The water analysed from the proposed site of the reservoir has been proved to be of exceptionally high quality, which is remarkable considering the large native population in and about the catchment area.

The rainfall for the year has been above the average.

(b) Nil.

(c) and (d) As in last year's report.

(e) The remarks made in last year's report can only be repeated. Of course they apply only to the village itself, as being the one place in the district, where these trades are carried on.

(f) Much improvement could be effected so as to minimise the contamination of foodstuffs in the stores. These latter should certainly be inspected periodically, and greater cleanliness insisted upon.

(g) As in last year's report.

(h) As in last year's report, but I once more draw attention to the general insanitary condition of the Location at Burn's Hill.

(i) The village cemetery is badly cared for. I am sorry to say that the old military cemetery at Fort Cox is in a neglected and disgraceful condition. The cemetery at Burn's Hill, used by the mission since 1830, is close to the river, and I find a portion of it has been washed away, the remainder lies low, and consequently further encroachments will occur.

(k) Nuisances are not abated, except by private individuals, actuated by personal ideas of cleanliness and health. As regards the village, application has been made to obtain a Municipality. Should this be successful, it is to be hoped that some attempts will be made to rectify the defects pointed out under the various headings.

(l) The Village Management Board has a site reserved on the Commonage outside the Village, for the isolation of cases of infectious disease, but as there is no proper enclosure, or buildings, practically nothing exists under this heading in the sub-district.

(m) There has been no Small-pox in the sub-district during the year.

Public Vaccination.—A comprehensive tour was arranged and sanctioned. Up to the end of the year, six centres have been visited, the total number vaccinated being 1,355, of which 318 were primary vaccinations. The lymph was obtained from Graham's Town, and from casual inspections, the results seem to be very good.

No Enteric Fever or Diphtheria has been noted, though I have every reason to believe in the constant presence of the former amongst the natives.

Bubonic Plague did not visit this sub-district, though King William's Town was an infected area. No active precautions were taken, but the public were generally warned in the terms of the Government Circular. The travelling of natives was restricted, but hardship was inflicted on them, by forcing them to go to King William's Town for inoculation. This had a serious effect on the labour supply, as the men at last would not face getting ill on the road, as they so often did. They should have been treated here, when they could have recovered from the effects at their own homes. Besides this, it has established a great dread of inoculation in the native mind, and one which it will be very difficult to overcome on future occasions.

Contagious Diseases Prevention Act.—Six cases of Syphilis have been placed under treatment during the year.

Leprosy.—Two cases have been notified during the year, one case coming from a neighbouring district, evidently with the idea of escaping detection.

I have noticed the prevalence of Scurvy amongst the boarders in the Mission Schools, and also those scholars returning from schools in other districts, whose homes are here. I have also noticed it in a few cases of men returning from work at Cape Town and other labour centres. I refer solely to natives; and amongst the scholars it affects the males somewhat less than the females. Anæmia, purpuric spots, swollen legs, and progressive debility are the chief symptoms. In females Amenorrhœa and an unhealthy obesity are early symptoms. Sponginess of the gums is not such a constant symptom as one would expect. I cannot find sufficient cause in errors and change of diet, but I do consider change of environment is a most important factor in these native cases. Abstention from school and ferruginous treatment seem to give satisfactory results, but there is an undoubted tendency to Phthisis in advanced cases. A case of Measles occurred in the St. Matthew's Mission School. The source of infection could not be traced.

There were 439 births registered and 303 deaths, European and Native.

Amongst causes of death I notice 81 Convulsions, 23 Consumption, 51 Dysentery, 43 Influenza, 55 Bronchitis and Pneumonia.

These figures, of course, are utterly insufficient for the population of this sub-district, but they show in proportion to the total a heavy infant mortality, taking Convulsions alone. Personally I can vouch for the great prevalence of Phthisis, especially amongst the so-called school Kafirs, as compared with the blanket Kafirs.

(iii) MIDDLE DRIFT.

DR. D. C. MCARTHUR, ADDITIONAL DISTRICT SURGEON.

(a) The condition of the general water-supply in this district is the same as reported last year, but water-boring has taken place at the gaol and site of future residence for the Assistant Resident Magistrate. Both were successful at a depth of about 250 feet, giving an estimated quantity per hole of 11,000 gallons per diem.

I would again point out the necessity of re-establishing the water furrow as a supply to Middle Drift itself. Now that the railway is open, some development of the place may be expected, and the urgent necessity of a water-supply will arise.

The rainfall for the year has been good.

(b) Nil.

(c) As in last year's report.

(d) Nil.

- (e) The one butchery and bakery is kept fairly well.
- (f) The state of the usual store of the district leaves much to be desired as regards non-contamination of foodstuffs.
- (g), (h) and (i) As in last year's report.
- (k) No nuisances have been brought to notice.
- (l) Nil.

(m) Small-pox.—One outbreak occurred in February at Victoria Sandili farm. Seven natives were attacked, all unvaccinated. The disease had existed for some days before being reported, and the infection was traced to a man returning from work at Port Elizabeth. There was no mortality, and the natives in the immediate locality were found well protected, only a few infants requiring vaccination. The Divisional Council was the authority concerned, and steps were taken for isolation and surveillance of seventy-five persons in the immediate vicinity of the outbreak. No spread of the disease occurred and the district was clear in May. No public vaccination has taken place in this district, but a tour has been arranged and authority obtained for its being carried out.

No cases of Diphtheria or Enteric have come to my knowledge.

Bubonic Plague.—Though King William's Town was an infected area, this sub-district with its large native population escaped the disease. The headmen were especially warned as to destruction of refuse and notifying mortality amongst rodents. It is to be regretted that no arrangements were made as to inoculation in the district itself, for as no one was allowed to travel out of the district without proof of inoculation, the natives hereabouts had to proceed to King William's Town to undergo the operation. The consequence was, that many who were proceeding to labour centres fell ill on the way from the after-effects of inoculation, and returned home. This has established a great dread of inoculation in the native mind, which will be difficult to overcome on future occasions. It would have been better had they been operated on in a centre near their homes, when they could have recovered from the after-effects before proceeding to travel.

The Death Returns for the year show a mortality of 264. Amongst them I find one death recorded from Enteric Fever, 67 from Dysentery and Diarrhoea, 41 from Consumption, and 28 from Convulsions (mostly amongst young infants.) Births are returned as 253.

One family was found suffering from Syphilis, and the members, eight in number, were placed under treatment.

39. KNYSNA.

DR. GEORGE MARR, DISTRICT SURGEON.

(a) We are still dependent for our water-supply on the rainfall collected from roofs of house, and stored in tanks and barrels. The Magistrate's residence and the gaol are supplied by pipes from a pure source near by, and there are a few wells in the lower part of the town. There are two dams for watering horses, etc. I need not repeat previous remarks about the desirability of obtaining a proper water-supply. The rainfall has been abundant, 30·82 inches for the year.

(b) There are no house drains, for reasons stated below. Open drains carry off the superfluous rainfall. One of these, which is also connected with a spring, had long been a source of complaint, on account of its running alongside of some stables, and has, at my suggestion, been diverted into another course.

(c) Night-soil is removed beyond the limits of the Municipality from each house once a week, and the closet bucket system is quite satisfactory. Slop-water is supposed to be buried in holes dug round the houses, but is sometimes simply thrown out. This nuisance is being attended to. Household refuse is removed by the Municipality to beyond the limits of the town.

(d) There is no overcrowding of dwellings, nor unfitness of same for human habitation, beyond what is inevitable amongst poor and coloured people.

(e) There is no slaughtering done within the town. Butcheries, bakeries, and dairies are kept in a satisfactory manner. One exception to this has to be noted. Dr. Thornton, the Plague Medical Officer, called attention to a case where the sleeping accommodation was not sufficiently removed from the place where meat was kept and sold, and the matter was dealt with by the Municipal Council.

(f) Sacks of meal, etc., in stores, are liable to infection where Plague-infected rodents are present.

(g) Cattle, swine, and horses, are kept in the town. An occasional nuisance arises in connection with these, but on the whole I think the condition of pigsties, stables, and cow-sheds, is all that could be expected.

(h) There is no regular Native Location. A large proportion of the natives and coloured people who work in the town live in houses scattered about, on two neighbouring farms.

(i) The Cemetery is on the outskirts of the town, and its condition, from a sanitary point of view, is as good as could be desired.

(k) Nil; except as above stated.

(l) There is no hospital except the Contagious Diseases Hospital, which has become a white elephant, and is likely to remain so unless patients can be compelled by law to go there for treatment. At present it serves the purpose of a Plague Hospital.

(m) The district has been fairly free from zymotic diseases. The severe epidemic of Measles referred to in last year's report continued in the remoter parts of the district for some time. Whooping Cough was prevalent also for a time. Two cases of Enteric developed here, but in each case the infection was contracted in other places, viz., East London and Cape Town. Both were treated with proper precautions, and both recovered. Four cases of Scarlet Fever were reported. The source of infection could not be definitely discovered, except in the case of a second child, who contracted the disease from another in the same house. All the cases were isolated. Four cases of Diphtheria of a mild type occurred during the year. In the end of September I forwarded the carcasses of some rats found dead in a store in the town, and they were found to have died from Plague. It was hoped that the outbreak was localised there, but the disease amongst rodents was found by the Plague Medical Officer to be all over the town. Plague-infected rats have also been found at three places in the district; and I was informed the other day that sick and dead veld rats had been found, before the discovery of Plague here, at a place thirty-six miles distant, but the matter was not reported.

One mild case in a human being occurred in October. There have been no others.

Under the superintendence of the Plague Medical Officer, every house and building in the town is being disinfected, after removal of any carcasses which may be found under the floors. Thousands of rats have been destroyed in the town and neighbourhood, and their numbers have now considerably diminished.

There have been no cases of Leprosy or Small-pox. Six cases of Syphilis have been treated in the Contagious Diseases Hospital during the year, and seventeen as out-patients. The aversion of people to going into

the hospital continues. On the whole, the treatment out of hospital has proved satisfactory, and in most cases the patients have come up regularly for their medicines. For tertiary cases, there is no objection to the system.

There were fifteen persons who received pauper relief during the year, but only two of them were on the list for over six months.

There has been no rural vaccination tour this year. Forty-one primary and five re-vaccinations were performed in the town, and I believe all except one to have been successful.

I have performed the duties of Port Health Officer during the year, and in addition to the general regulations, have kept under observation for twelve days people arriving from Plague-infected ports when living in the town, and have received written reports regarding the state of health of those who had gone into the country.

40. KOMGHA.

DR. A. CARRINGTON SEALE, ACTING DISTRICT SURGEON.

Owing to the illness of the District Surgeon, Dr. Beckford, I have been acting since the end of November.

The general health in the district, since the beginning of the year, has been excellent. There has been no outbreak of Enteric Fever, Small-pox, or Diphtheria. The entire district was vaccinated in 1902.

(a) Nearly all the water used for household purposes in the village is rain-water stored in tanks. A spring exists close to the village, which is used when rain-water is scarce. The water is good, but the well requires cleaning, and I would advise that the Village Management Board be called upon to keep the said well in a fit and proper condition.

(b) There is no system of sewerage and drainage.

(c) The bucket system is not in use in the village. Pits have been provided at certain points for all village refuse, and slops, etc.

(d) There is no overcrowding, neither is there any dwelling unfit for habitation.

(e) The village has one butchery. All animals are slaughtered in an enclosed compound, which is regularly disinfected, and kept in a satisfactory condition.

(f) and (g) Satisfactory.

(h) There are two Native Locations in the district, one close to the village, the other at Mooi Plaats; they are under the care of an inspector, and, I believe, are quite satisfactory.

(i) There is one cemetery which is quite satisfactory.

(k) Nil.

(l) There is but one hospital in the district, the Government Contagious Diseases Hospital, which contains one room, and has accommodation for five persons (of same sex).

(m) Nil.

41. KURUMAN.

DR. GEORGE BEARE, DISTRICT SURGEON.

The health of the Kuruman District has been exceptionally good during the past year. Malarial Fever, which generally is rather virulent, and often complicated with Pneumonia, was of a much milder type than usual.

(a) The Kuruman River is the largest permanent water in the district. There are also permanent streams at Phakuni, Magagaphioi, Lencwelengwe, and Grootfontein. All these waters are remarkably free from organic impurities at the source, but all contain a certain amount of lime. During the partial drought, which has existed in Bechuanaland for about ten years, the fountains have become smaller and less available for purposes of irrigation. Owing to the fact that the various streams are utilized for irrigation, they are polluted by the manure which is placed on the cultivated lands, and this fact would lead to serious danger in case of an outbreak of such a disease as Enteric Fever, as the drinking water is almost entirely taken from the running streams.

(b) There is no system of sewerage or drainage.

(c) Night-soil, slop-water, etc., are either thrown on the veld at some distance from the township, or buried.

(d) Among the European population there are no overcrowded houses, but in the native villages there are many huts both overcrowded and unfit for human use.

(e) There are two butcheries at Kuruman, both of which are well-managed.

(f) The sale, storage, and preparation of human food, seems to be properly carried out.

(g) Cattle, swine, etc., are kept in open kraals, and do not affect the public health.

(h) The locations in the district are far apart and situated in the open country, and though very little attention is paid to sanitary matters, no diseases have hitherto been traced to this cause.

(i) There are two fenced-in burial grounds in the Kuruman District—one at the Mission Station, the other—which is a military cemetery—at the Kuruman Township. Both are well-managed. The native burial grounds are not fenced in and are subject to no regulations.

(k) Nothing has been done for the abatement of nuisances during the year.

(l) The Gaol and Contagious Diseases Hospitals are the only hospitals in the Kuruman District. In the latter two hundred and eighty-three patients were treated during the year. Of these one hundred and thirteen remained in hospital at the end of the year—thirty-three died, and the remainder were discharged cured.

(m) There were no epidemics of infectious diseases in the Kuruman District during the year 1903.

42. LADISMITH.

DR. R. W. WATSON, DISTRICT SURGEON.

(a) The Water-supply of the town of Ladismith is pure and abundant. The water is brought from the mountain in an open furrow to a small reservoir above the town, and is then carried through the town in pipes. There is very little danger of the town water being polluted, as there are no houses or cultivated lands above the water-furrow.

In the country the water is generally bad, and must be polluted from houses, kraals, etc., situated above the water-furrows, and from the general custom of washing clothes in the rivers, the water of which is used by the people living lower down.

(b) None exist.

(c) Night-soil is removed from a certain number of houses by a contractor twice a week. The rest of the people have no closets, or bury the night-soil in their gardens. The contractor empties the night-soil on the veld some distance from the town. Slop-water is usually emptied into the gardens, and household refuse carted into the veld.

(d) Most of the houses occupied by the poor whites are overcrowded, a large family often living in one small room. The natives generally live in a small hut, or sleep under a few sacks supported by poles.

(e) Butcheries and bakeries are well conducted ; no dairies exist ; slaughtering is now done outside the town in the veld.

(f) Satisfactory.

(g) I do not think any nuisance is caused by the animals kept in the town.

(h) The native camp has been removed some distance from the town. No sanitary arrangements, order, or cleanliness exist, and in many cases families live under a few sacks or tin plates.

(i) There is one burial ground in the town belonging to the Dutch Reformed Church ; it is near some houses, and is getting filled up. There is a burial ground, belonging to the Berlin Mission, outside the town, and another at Amalienstein Mission Station, and one belonging to the Mission Station at Zoar.

(k) A burial ground should be set apart for coloured people and paupers, who do not belong to a church, and another should be set apart at Buffelfontein. All houses should be provided with closets in the town, and owners compelled to have their night-soil removed regularly.

(l) No hospital accommodation exists in the district.

(m) Enteric Fever was confined to a small area at Groote River, where about fifteen cases occurred, with one death. There were a few scattered cases in other parts of the district. The outbreak at Groote River could not be traced to any specific cause ; it started in some overcrowded huts, and, I think, was spread by wind blowing desiccated fœces about. Diphtheria, which was prevalent in 1902, still continued to spread this year ; I estimate that at least one hundred cases occurred with eleven deaths. The cases were widely distributed, and mostly on the west of the district. The success of the anti-diphtheritic serum was very marked, no fatal cases coming to my knowledge which were injected early after infection. No steps were taken by the Local Authority to suppress the disease. I consider that disinfectants should be supplied, and that when infectious disease occurs amongst poor coloured people, the District Surgeon should be sent out to attend them. Vaccination was only carried out at a few centres this year, and was then stopped. Five centres were visited and 215 persons vaccinated. As far as I could learn vaccinations were mostly successful. Eight centres were not visited this year, at which 700 persons were vaccinated last year.

Two cases of Tetanus occurred during the year, both being fatal. Pneumonia, of an epidemic character, was prevalent at the beginning of the year.

There were 395 births and 159 deaths during the year, 75 deaths being in children under two years of age.

43. MAFEKING.

DR. T. W. P. HAYES, DISTRICT SURGEON.

(a) Water-supply.—No alteration has taken place in the water-supply of the town. The open furrow mentioned in my last report is still in use.

It is undoubtedly a means by which the water may become contaminated between its source and delivery. The contamination has been particularly noticeable after heavy rainfall. Some specimens examined by me gave a copious deposit, and microscopic examination showed Bacilli, resembling the *Bacillus Coli Communis* in large numbers. The supply is inadequate for the requirements of the town especially during the dry season. Steps are being taken to supply the deficiency. The Railway Camp receives its supply from a well north of the town. It is fairly good in quality, but insufficient in quantity.

(b) Sewerage and Drainage.—The system adopted is that of buckets and pails. It appears to be efficiently carried out.

(c) Night-soil, etc., is collected nightly and carried outside the town. It is then deposited in pits where it cannot contaminate any water supply.

(d) Overcrowding.—No case of overcrowding has been reported, and no houses have been condemned as unfit for habitation.

(e) Management of Slaughter-houses, etc.—These are kept in good order and are in no way likely to affect the health of the population.

(f) Sale, Storage, and Preparation of Human Food.—This appears to be satisfactory. No supplies have been condemned as unfit for human food.

(g) The Keeping of Cattle, Swine, and other Animals.—There is one small herd of cattle kept on the outskirts of the town. The sheds and yards are kept in excellent order. The various stables in town are all well kept and clean.

(h) The Order, Cleanliness, and General Sanitation of Native Locations.—This is in every way satisfactory.

(i) Cemetery.—This is in a satisfactory condition. The site is well chosen, being well outside the town, and where it cannot pollute any water-supply.

(k) Abatement of Nuisances.—These are promptly and efficiently dealt with by the Local Authorities.

(l) There is a lazaretto situated outside the town for the treatment and isolation of infectious diseases.

(m) Infectious Diseases.—The district has been very free from infectious diseases. Two cases of Enteric were treated, but neither arose in the district. Both were imported from Johannesburg.

A small outbreak of Diphtheria occurred at "Weldon," but was promptly got under. Four persons were attacked, namely, two native and two European children. Of these the two natives died. The disease was first diagnosed on the 22nd August, 1903, and the last case was found on the 4th September, 1903. The Divisional Council took energetic steps to prevent the spread of the disease. The infected huts were burnt, as was the clothing, and the sick were strictly isolated. Those exposed to infection were examined from time to time.

No case of Small-pox occurred in the district.

Vaccination.—An extensive tour was made over the district, and various native stadts were visited. In the town, native stadt and location various days were arranged. The natives showed great eagerness to undergo the operation. I am unable to state the result in all cases, as no second tour was made, but, where one was able to examine the patients a second time, the percentage of successes was high.

Contagious Diseases.—Fifty-eight remained under treatment at the end of the year. With some exceptions the attendance has been very satisfactory. Notice was sent to these with the result that they are now coming in satisfactorily.

Paupers.—Owing to the depression in this and surrounding districts, the number of paupers treated has been large. Many of those treated in

the hospital are people who have left Rhodesia in search of employment, many of them travelling on foot the whole way. Some of these have fallen ill of the privations undergone.

Lepers.—There are no known Lepers in the district.

44. MALMESBURY.

DR. A. J. T. ROUX, DISTRICT SURGEON.

General Health Statement.—Typhoid Fever prevailed in the early part of the year in the town, but lessened considerably, a few isolated cases occurring only at the end of the year; in the district it needs no comment.

A few cases of Scarlet Fever, Measles, Whooping Cough, Diphtheria, and Croup were notified.

Throughout the year Small-pox was brought into this district from the surrounding districts, but each invasion was steadily suppressed by vaccination, re-vaccination, and segregation.

(a) Water-supply.—An adequate supply of water in this town is becoming an urgent necessity.

The supply on farms has been and must be severely condemned, being insufficient in quantity and impure in quality.

(b) Sewerage does not exist; drainage is open, but in the village not built up, so that stagnant dirty pools are formed in consequence.

(c) The bucket system for removal of excreta, where in use, is a source of danger, as in the neighbouring villages no control is exercised over its distribution. In this town more care has been exercised about the disinfecting of the pails than heretofore.

The removal of slop-water is still in the "thought of" stage.

(d) Overcrowding in low-class tenements is the exception.

(e) Bakeries and butcheries are kept clean, at least, I have had no occasion to interfere.

No slaughtering nor keeping of pigs is allowed in this town, but in the villages that development has not yet been reached.

(h) The location of squatting Hottentots lately from Namaqualand on farms, often near the villages, stations or this town, can only be condemned, as no adequate provision is made for their water-supply, their housing, and the removal of their excreta.

(i) The cemetery at Riebeek Kasteel, centrally situated, is an eyesore to a sanitarian.

(k) By far the greatest general nuisance is the dust which abounds in this town and on every high road.

(m) Typhoid Fever has already been sufficiently mentioned.

Small-pox requires a lengthy paragraph.

The outbreak started at Riverlands, and it was premised that a mild case was intermediary between a case that had lately been segregated at Rentzkie's Farm. A boy and three other cases developed the disease at Riverlands, and one at Groenriver.

They were locally segregated, and this invasion of the disease was soon over. Two other isolated cases occurred a few months after, and another was thought to have contracted it there; all these cases came from some cottages, a few yards off the Cape Division boundary.

The Hermon District gave us eight cases, which were also locally segregated, with the exception of one.

Lower down the Berg River a solitary case occurred which was segregated in a special lazaret near to this town.

Moorreesburg was invaded from Piquetberg village and district.

Those in the village of Moorreesburg were locally segregated in a camp, while those in the district were sent to the Malmesbury Bakenfontein Lazaret.

The next attack was somewhat nearer home, in which four farms were implicated. These were easily dealt with, the removal of all to the lazaret being easily effected with the assistance given by the owners, and the epidemic died out.

At Tweekuilen, Small-pox was brought from Cape Town.

Two cases were segregated in the Bakenfontein Lazaret, and the others, three in number, locally.

The advantages and disadvantages of farm segregation may here be mentioned. When the family of the owner of the farm is affected, he is anxious to have the homestead on his farm segregated, but finds the restrictions, when improvement takes place, very irksome, and, from my view, it is there that sufficient care will not be taken. When anybody else is attacked, the farmer is anxious that the patient should leave at an early date, and I have never been able to feel sure that some contact does not take place in spite of their being guarded when left on the farms.

The farm Rheboksdam, with neighbouring farms, had seven cases brought from the Paarl by a visitor. These were segregated, and the invasion was shifted to Preekstoel, where two cases occurred, whether infected from Rheboksdam it was impossible to say.

The advent of Small-pox was reported in September in the neighbourhood of Vredenburg, and, as the medical man thought it to be some severe form of Eczema, which they did not report though they called it Amaas. Thirty cases, it is said, had already recovered before action was taken.

A lazaret was established at Vredenburg of which Dr. Cashel took charge, and cases were isolated there from St. Helena Bay and Cloete's Kraal. Thirty-two cases were there treated with the desired effect of stamping the epidemic out; considerable difficulty was experienced there, as well as in the other parts of the district, to get at all those who had never been vaccinated, and to persuade those who had been vaccinated in their youth to have themselves re-vaccinated.

Malmesbury township was likewise invaded twice, the origin in each case being unknown. The cases were segregated on the Town Commonage. The inhabitants were vaccinated, and no further cases have been reported.

The disease is what has been frequently called Amaas, and it attacks black and white, males and females.

Recent vaccination is a protective; one or two small cicatrices on the arm indicate that re-vaccination is a necessity.

No deaths have occurred. All ages have been under treatment, from ten days to seventy-five years.

No cases were confluent or hæmorrhagic.

Scabbing was slow in all; some vaccinated persons, but insufficiently protected, took the disease as severely as very mild cases in unvaccinated persons.

I would respectfully urge that the law regarding vaccination should be amended so that the teacher, who receives a child un-vaccinated into school, should be liable to a penalty. A child who is unvaccinated, if discovered, should be forthwith committed to gaol, there to be vaccinated.

The present methods adopted for the prevention and for the suppression of Small-pox are inadequate.

It should be incumbent on the parent of each child to have his child vaccinated before it is three months old as the law now stands, but he should deliver to the Local Authority a certificate, stating that the child is not only vaccinated, but is sufficiently protected.

To effect this, public vaccinators should be appointed in each district, who would vaccinate monthly, and grant certificates.

Anyone who is not protected by vaccination now should, on or before a certain date, give proof to the Local Authority that he has been successfully vaccinated, or proof that he is immune (three unsuccessful vaccinations), failing which a heavy penalty should be imposed.

Such an alteration would do away with the present visits by the District Surgeon at intervals of a few years, when even a second visit or revision is not allowed, and when a large number of people remain unprotected.

It might be further enacted that all medical practitioners be forced to report all persons who are not sufficiently protected; such cases would be rare, as the medical man could then and there vaccinate the individual, and, if successful, could grant a certificate, when no action would be taken against the individual now fully protected.

The present regulations work badly, and to me have been a cause of anxiety.

The Annexures "A" and "B" will act as correctors to any statement which my report contains. "A" gives a rough estimate of the whole population calculated from the 1891 Census with an annual increase of 500. The death-rate is a little over 500; the birth-rate somewhat under or over 1,000 per annum.

The chest diseases are increasing; Typhoid Fever has had too many victims in urban areas; Puerperal Fever has again made its appearance.

Diarrhoea and Vomiting, as is usual in a warm country, have had many victims; and Convulsions is a general term, and may mean anything, but I fear from the locality, Mamre, from which the greater number of these cases come, it means Tuberculosis in the young, which, of course, swell the death-rate of that disease greatly.

Annexure "B" gives accurate information with regards to the Small-pox epidemic.

ANNEXURE A.—DISTRICT OF MALMESBURY, CAPE COLONY.

	URBAN POPULATION.				RURAL POPULATION.				Total.
	European.		Mixed.		European.		Mixed.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Population, rough estimate	1,075	1,235	1,413	1,563	5,416	5,022	7,404	6,262	29,390
No. of Deaths	44	35	83	60	57	41	151	141	614
Bronchitis	2	0	0	2	4	0	4	3	15
Pleurisy	0	0	0	1	0	0	0	0	1
Pneumonia	12	6	21	9	11	12	32	18	121
Consumption	3	5	9	8	3	4	30	31	93
Influenza	1	0	0	0	1	1	3	5	11
Croup	0	0	0	0	6	0	0	0	6
Diphtheria	1	0	1	0	0	1	0	1	4
Measles	0	1	1	2	1	3	4	6	18
Scarlet Fever	1	0	0	0	0	0	0	0	1
Puerperal Fever	0	1	0	2	0	0	0	4	7
Typhoid Fever	2	1	10	5	1	3	6	4	32
Whooping Cough	0	0	2	1	0	1	3	3	10
Diarrhœa and Vomiting	5	4	10	6	2	0	11	8	46
Marasmus	1	1	3	3	2	0	4	0	14
Convulsions	0	2	6	4	6	1	19	28	66
Old Age and Debility	0	4	1	3	1	3	9	5	26
Heart Failure	4	1	4	2	3	4	4	1	23
Apoplexy	2	1	0	2	3	2	1	4	15
Dropsy	0	0	0	0	0	0	2	1	3
Kidney Disease	3	0	1	1	1	2	1	2	11
Cancer	2	1	1	1	2	1	3	2	13
Accidental	1	0	5	0	0	0	7	4	17
Liver Disease	1	0	0	0	1	0	1	0	3
Meningitis	2	2	1	2	2	1	0	2	12
Peritonitis	0	1	0	2	0	0	1	0	4
Child-birth	0	1	0	0	0	1	0	4	6
Erysipelas	0	0	0	1	2	0	0	1	4
Sundry Causes	1	3	7	3	5	1	8	4	32
Total	44	35	83	60	57	41	151	141	614

SMALL-POX.

ANNEXURE B.—REPORT as regards the state of Small-pox in the District of Malmesbury from 1st January to 31st December, 1903.

Place of Outbreak.	Date of first Discovery.	Believed Source of Infection.	No. of Cases discovered during the Year.										Grand Total.	Place of Isolation.	How Isolated.	Discharge of Last Case.	Authority dealing with Outbreak.	No. of Guards employed.
			Unvacci- nated.					Pre-vacci- nated.										
			Persons.	Europe- an.	M.	F.	T.	Persons.	Europe- an.	M.	F.	T.						
Riverlands	9.12.02	Rentzkie's Farm	1	...	1	...	3	...	3	...	4	Locally Bakenfontein	Segregated Lazaretto	22.1.03	Divisional Council...	2		
"	25.4.03	Malmesbury	...	...	...	...	1	...	1	...	1	Locally	Segregated	15.6.03	"	2
"	18.5.03	Pella...	...	...	...	...	1	...	1	...	1	"	"	17.6.03	"	1
Groenrivier	23.12.02	Riverlands	1	...	1	...	1	...	1	...	1	"	"	22.1.03	"	1		
Fleeschbank	13.2.03	Herman	1	...	1	...	1	...	1	...	1	"	"	16.3.03	"	1		
Malrug	13.2.03	"	6	...	3	...	3	...	6	...	7	"	"	13.3.03	"	1		
"	28.2.03	Malrug	1	...	1	...	1	...	1	...	1	Bakenfontein	Lazaretto	30.3.03	"	1		
Langkloof...	17.3.03	Porterville Rd. Camp	1	...	1	...	1	...	1	...	1	"	"	16.4.03	"	1		
Kiesenbosch	11.5.03	Riverlands or Pella	1	...	1	...	1	...	1	...	1	"	"	15.6.03	"	1		
Moorreesburg	12.5.03	Berg Riv. Bridge	1	...	1	...	1	...	1	...	1	Moorreesburg Bakenfontein	"	26.6.03	Village Manag. Board	1		
"	23.6.03	Piquetberg	4	...	1	...	3	...	4	...	11	"	"	18.8.03	Divisional Council...	1		
"	27.7.03	Former Cases	1	...	1	...	1	...	1	...	1	"	"	25.8.03	"	1		
"	25.5.03	Piquetberg Village	5	...	2	...	3	...	5	...	8	"	"	26.6.03	"	1		
Kerschofontein	21.6.03	Unknown	8	...	3	...	5	...	8	...	7	Moorreesburg Bakenfontein	"	15.8.03	"	1		
Amoskuil	21.6.03	Clanwilliam Military Camp	7	...	4	...	3	...	7	...	7	"	"	19.7.03	"	1		
Elandsvallei	7.7.03	Unknown	5	...	3	...	2	...	5	...	5	"	"	26.8.03	"	1		
Orangefontein	21.7.03	Amoskuil	3	...	2	...	1	...	3	...	3	Europeans locally se- gregated	"	"	"	1		
Tweekuilen	4.8.03	Cape Town	5	1	1	...	3	...	5	...	5	{ One E. Bakenfontein, Others locally	Local Lazaretto Lazaretto Segregated	26.8.03 7.10.03	"	1		
Rheboksdam	9.10.03	Paarl	7	...	4	...	3	...	7	...	7	Bakenfontein	Lazaretto	5.12.03	"	1		
Preckstoel	14.11.03	Paarl Case Contacts	2	...	1	...	1	...	2	...	2	"	"	One case re- maining in Lazaretto.	"	1		
Brittania Bay	3.9.03	Unknown	3	...	3	...	...	...	3	...	3	Honing Klip	"	14.11.03	"	1
Stompnose Bay	2.9.03	Brandhuis	3	...	3	...	...	...	3	...	3	"	"	6.11.03	"	1
Brandhuis...	28.8.03	Patrysberg	3	...	1	...	2	...	3	...	3	"	"	31.10.03	"	1		
Cloeteskraal	15.8.03	"	5	...	3	...	...	...	5	...	5	"	"	29.10.03	"	1
Sleeper's Bay	2.9.03	Brandhuis	3	...	3	...	...	...	3	...	3	"	"	3.11.03	"	1
Patrysberg	10.9.03	Unknown	7	1	1	...	2	...	7	...	7	Locally Honing Klip	Segregated Lazaretto	10.10.03	"	1		
Steenberg's Cove.	4.10.03	Unknown	8	...	4	...	4	...	8	...	8	"	"	12.12.03	"	1		
Malmesbury																		
St. Francis Street...	3.4.03	Unknown	...	...	...	...	5	...	2	...	2	Malmesbury	"	10.6.03	Municipality	2
Kerk St. & Loedolf St.	27.2.03	Unknown	...	...	...	...	2	...	1	...	1	"	"	10.6.03	"	2
Kerk St. Railway Stn	20.5.03	Unknown	...	...	...	...	1	...	1	...	1	"	"	10.6.03	"	2
Total			92	2	4	36	50	13	0	0	8	5						

NOTE.—None of the above Cases terminated fatally.

(ii) SUB-DISTRICT OF HOPEFIELD.

DR. W. WHEATLEY HART, ADDITIONAL DISTRICT SURGEON.

The sub-district of Hopefield is one of those portions of the Cape Colony which can be correctly described as health resorts in the true sense of the word.

Regarding temperature, although during the summer the sun is powerful, yet during most days of the week its heat is tempered by a delightfully cool south-westerly breeze which, coming as it does from contact with the Arctic Stream, is bracing and refreshing. Strangely enough at night-fall the breeze nearly always fails, and the consequence is that the nights are pleasant without too great a reduction of temperature.

The soil of this sub-district consists almost entirely of light sand which, however, is far more fertile than at first glance might be expected, and as a result grain is very largely grown, and in every direction verdure is abundant.

The sub-district forms an area which is bounded on the north by the Berg River, and on the west and south by the ocean. The coast is indented in the form of numerous bays, and though most of these whilst being pretty are only useful as fishing spots, yet there is one which is a land-locked bay (Saldanha Bay), and forms a superb natural harbour, and this will probably be used eventually as the chief port of South Africa.

The rainfall for 1903 was as follows :—January, 1·02 inches ; February, ·06 inch ; March, ·81 inch ; April, ·89 inch ; May, 2·33 inches ; June, 3·13 inches ; July, ·79 inch ; August, 2·19 inches ; September, 1·5 inches ; October, 1·52 inches ; November, ·38 inch ; December, ·03 inch. Total, 14·65.

The total of rain for the year of 14·65 inches is an average downfall, and therefore gives a very fair idea of the general humidity.

(a) The chief water-supply of the village and the whole of the district is the Berg River, but there are many farms on which abundant springs of pure water exist. So far as the Berg River is concerned it may be said at once that it contains a supply which is pure and sufficient for all the villages in the sub-district, viz.:—Hopefield, Steenberg's Cove, Stompnose Bay, Paternoster, Vredenburg, Houtje's Bay, and Lang Baan. The Berg River will be an effectual source of supply when the villages have increased to the size of towns. Water should be led from the Berg River to Hopefield, and then on to the smaller villages.

The principal village in the sub-district is that of Hopefield. It is divided by a so-called river into an eastern and western portion, and there is at present no bridge to enable traffic to pass from one side to the other when the river is in flood.

Hopefield boasts of a Board of Village Management, but the arrangements regarding water-supply are about as bad as they possibly could be. Potable water is obtainable on the hill on the western side of the village, but the water which is led from this hill in pipes to the eastern side is brackish, and contains sulphides which readily decompose and the water becomes a solution of sulphuretted hydrogen. This supply of water has not even had the benefit of the elementary precaution of being enclosed or fenced at its source.

As a result of this supply of bad water, a large number of the inhabitants have tanks in their yards for retention of rain which they use as drinking water.

(b) Sewerage and drainage are, of course, conspicuous by their absence.

(c) In the village of Hopefield there have been many cess-pits, one of which existed recently in a spot where it was contaminating the area of a piece of ground from the sub-soil of which a large number of people were obtaining their drinking water. Cess-pits are now being closed, and an attempt is being made to compel residents to use cement-floored privies in which the ordinary removable buckets will be placed. At present the collection and disposal of night-soil are left to the individual, and the thought, as to how and where it is disposed, is horrible to contemplate.

No provision has been made regarding the disposal of slop-water, household, or other refuse.

(d) Very little overcrowding exists, but many of the dwellings inhabited by the coloured people are unfit for human habitation. Many of the white people inhabit rooms which are unhealthy, but this is to a large extent owing to the dearth of houses. The scarcity of dwellings is due to the fact that land is at present at a fanciful price, owing to the owners of the ground having wonderful notions of the great boon which they think will take place directly Hopefield is connected by rail with Houtje's Bay. The ground being temporarily at an impossible price, builders and others are unable to erect houses to meet the requirements of the current population.

(e) There is no surveillance exercised over slaughter-houses, butcheries, bakeries, dairies, and other trades affecting health.

(f) Regarding the sale, storage and preparation of human food there is again no supervising officer.

(g) Cattle, swine, and other animals are allowed to be kept in the village.

(h) There is no Native Location or Camp of Natives in the sub-district.

(i) The cemetery of Hopefield is on rising ground, and it is so placed that sub-soil drainage percolates through erven on which houses are built.

(k) Regarding the abatement of nuisances generally, the fact of the existence of a Village Management Board gives apparent hope of better things, but no radical abatement is at all probable, as the inhabitants have a pious horror of taxation. The veld all round the village is used by the coloured people for the purposes of nature, and a nuisance is thereby perpetuated and combined with an unmistakable menace to health.

The general health of the people both in the villages and on the farms is fair, but is by no means what it should and would be if nuisances generally were abated.

(l) There is a hospital at Lang Baan where cases of Bubonic disease were treated. The hospital is full of stores, but is under no surveillance, and has been simply closed. It ought to be visited at an early date by a Surgeon, in order to see in what state of efficiency it now exists, and the condition of the contained stores which are said to be worth some hundreds of pounds.

(m) There has been no outbreak of Enteric Fever, but a case was imported from Johannesburg on to a farm, and seven others there took the disease; all the cases recovered.

No cases of Diphtheria have been recorded.

With reference to Small-pox, an outbreak has occurred, and the first case was diagnosed on a farm named Klette's Kraal, on 28th August, 1903. It is unknown from what source the infection in this case was conveyed. From Klette's Kraal the outbreak spread to places on the sea-coast, as Steenberg's Cove, and other villages.

All details regarding the suppression of this outbreak were undertaken by the Divisional Council.

Small-pox is for the moment absent from the sub-district, but, I am of opinion (and it is an opinion which is shared by others), that it is pretty nearly certain that all the clothing handled by the infected persons cannot have been destroyed, and hence, I fear, that with the advent of autumn the disease will break out afresh from the fomites of clothes which have escaped the vigilance of the guards and others.

Bubonic Plague has not excited the notice of the authorities here, and no precautionary measures have been adopted. Rats are not often seen, although mice are very prevalent.

No cases of Scurvy or Epidemic Pneumonia have to be recorded.

I should like to enter a caveat against dogmatism from northern latitudes on the treatment of disease in South Africa.

In sunny South Africa one sees wounds (made and treated in defiance of all Listerian principles) heal with astonishing rapidity; one learns that the dangers of Chloroform as an anæsthetic here are wonderfully less than exist elsewhere; further we see outbreaks of Small-pox affecting the individual in so mild a manner that many medical men thought they were dealing with a separate disease, and were entrapped into calling it by another name (Amaas). On the other hand some diseases affect the individual with greater virulence, and this is often seen in outbreaks of Diphtheria.

Regarding Leprosy, I would say that in South Africa we know that it is contagious, and we know that it runs thereby through members of a family, and finally, I think, we know that in many cases the eating of fish (either fresh or cured) is not the cause or source of the disease.

In a conversation, which some years ago I had the honour of having with Professor Hutchinson, I could not but think that he accepted as proved that in every part of the world there was necessarily some connection between Leprosy and the eating of fish.

45. MIDDELBURG.

DR. H. HOLZMANN, DISTRICT SURGEON.

(a) Water-supply.—The water-supply is still conducted in the same way as formerly, for which see my previous report, and my report for 1901.

A meeting was held on the 27th May, a report of which I beg to submit.

This meeting was composed of the ratepayers of Middelburg, and was for the purpose of considering the advisability of undertaking, carrying out, and effecting a scheme for the supply of good water to the inhabitants of Middelburg, with power:—

- (1) To appoint a committee of householders to act jointly with the commissioners to carry out and effect such a scheme.
- (2) To take or authorise to be taken counsel's opinion as to the rights of the Municipal Council to divert a supply or part of existing water-supply in pipes for household purposes.
- (3) To authorise a loan from the Colonial Government for the purpose of carrying out this scheme, the maximum amount not to exceed £3,000. Mr. N. F. de Waal was appointed chairman, and pointed out in a very able manner the advantage which the pipe system would have over the present one, with the result that when the

above resolutions (1, 2, and 3) were put to the meeting they were carried unanimously. As these resolutions have been accepted favourably, a water-supply in pipes is, in my opinion, a thing of the near future. A site has been fixed on, and boring operations are to begin in January, 1904.

(b) Sewerage and Drainage.—There is nothing fresh to report under this head, no sewerage or drainage scheme having as yet been adopted.

(c) Night-soil, Slop-water, and Rubbish.—*Re* night-soil, the bucket system works satisfactorily. The complaint which I made in my last report with regard to removal of slop-water and household rubbish still holds good, as the supply of carts and labour for this purpose is quite inadequate, and there are cases where the slop-water has not been removed for weeks. This is a very serious menace to public health, and the Municipality should be compelled to take immediate steps to remedy it.

(d) Overcrowding.—During the year there was one complaint of overcrowding in a building on the road to the Military Camp. On the proprietor having been approached the grievance was remedied immediately. During the year several inspections were made at night time, but no other cases were discovered.

(e), (f), and (g).—There is nothing fresh to report under these heads. Please refer to my previous report.

(h) Location.—The condition of the location stills remains very good. A Location Inspector has been appointed during the year to look after the natives.

(i) There is nothing fresh to report under this head.

(k) The great complaint in Middelburg at present is the dust. There are no water carts or rollers. The stones put down on the streets are of a very inferior quality, crumbling into dust after a very short time. I am informed by one of the leading inhabitants that a very hard stone, which causes practically no dust, may be had at a slightly increased cost. The excessive dust at present is very bad for people with weak chests, giving rise to Bronchitis and Pneumonia, besides contaminating the water, etc. If we had a sufficient supply of water this could easily be remedied by watering the streets.

(l) There is a small hospital situated about three miles from town belonging to the Municipality, specially built for isolating Small-pox cases.

(m) Enteric, Small-pox, Diphtheria.—Enteric Fever cases during the year were forty in number, chiefly amongst the European population. The source of infection could generally be traced to bad water, and the difficulty in removing slop-water, etc.

Small-pox.—The outbreak of this disease, which started on the 29th August, 1902, is practically stamped out in this district. The last case reported was on the farm Komkomerfontein, on the 20th September, 1903, and the last case in the town hospital was on the 20th August, 1903. An outbreak of Small-pox occurred amongst the natives employed by the Military, and living in a military compound on the farm Grootfontein. Up to the 30th December, 1903, ten patients were admitted to hospital from this source. During the year there were two European adults and one child and fifty-one native adults and fourteen children attacked by the disease. There were seven deaths in native cases. All coloured patients were immediately removed to hospital, and contacts isolated in tents on the hospital grounds. The Divisional Council and the Municipality have done everything in their power to suppress the outbreak. Every contact was vaccinated or re-vaccinated on removal to the isolation tents, and it was due to those precautions that the disease was stamped out.

Diphtheria.—There were six cases in European children, and nine cases in coloured children. The source of infection was probably due to the excessive dust, want of proper hospital accommodation, and isolation.

On the whole the health of Middelburg during 1903 compares very favourably with former years. Owing to the large garrison being stationed here the civilian population has also increased, and the death-rate of 286 for 1903 on a population estimated at 5,000 is 57 per 1,000, but the infantile deaths from Diarrhœa and Pnuemonia were 108. The want of a cottage hospital is greatly felt here. The influx of strangers to the town is very large, and, as most of these people have to live in crowded boarding-houses or hotels, the danger of infectious diseases breaking out would be greatly lessened if the patients could be immediately removed to a suitable hospital.

MIDDELBURG DEATH RATE, 1903.

CLASS.	DISEASE.	European.		Coloured.		TOTAL.
		Adults.	Children.	Adults.	Children.	
I.	Small-pox ...	...	...	4	3	7
	Infantile Diarrhœa ...	...	3	...	54	57
	Dysentery ...	1	...	3	...	4
	Phthisis ...	7	...	15	...	22
	Whooping Cough ...	...	...	...	3	3
	Enteric Fever ...	1	...	1	...	2
	Congenital Syphilis ...	...	...	...	5	5
	Diphtheria ...	...	2	...	2	4
	Scarlet Fever ...	1	...	1	...	2
	Meningitis ...	...	1	...	1	2
	Tetanus ...	...	...	1	...	1
II.	Marasmus ...	...	...	...	4	4
	Rickets ...	...	...	...	1	1
	Asthenia ...	...	2	...	...	2
III.	Cancer of Stomach ...	2	...	...	...	2
	Carcinoma of Pelvis ...	...	...	1	...	1
IV.	Premature Births ...	...	3	...	7	10
	Senile Decay ...	1	...	2	...	3
V. 1. 3. 3. 4. 5. 6. 8.	Convulsions ...	...	1	...	...	1
	Apoplexy ...	2	...	...	...	2
	Heart Disease ...	2	...	6	1	9
	Fatty Heart ...	...	...	2	...	2
	Cardiac Failure ...	...	...	2	2	4
	Pericarditis ...	...	...	1	...	1
	Inflammation of Lungs ...	7	5	23	48	83
	Bronchitis ...	2	...	2	8	12
	Pleurisy ...	1	...	...	...	1
	Gastro Enteritis ...	...	...	5	4	9
	Gastritis ...	...	...	2	2	4
	Peritonitis ...	1	...	2	...	3
	Enteritis ...	...	...	1	...	1
	Gastric Catarrh ...	...	...	2	2	4
	Cirrhosis of Liver ...	2	...	...	...	2
	Nephritis ...	2	2	1	...	5
	Bright's Disease ...	...	...	1	1	2
VI.	Accidents ...	2	...	2	2	6
	Murder ...	1	...	...	...	1
VII.	Exposure ...	1	...	...	...	1
	Necrosis of Lower Jaw ...	...	...	1	...	1
						286

With regard to the high death rate in Infantile Diarrhoea, this is caused, in my opinion, through the long drought causing scarcity of cow milk. The prohibitive price of milk at the present time causes especially natives to resort to other articles of food in feeding their children which are, however, very unsuitable.

46. MOLTENO.

DR. H. V. PECHELL, ACTING DISTRICT SURGEON.

(a) The water-supply is greatly improved. In addition to sources noted last year, we have now one borehole, seventy-two feet deep, supplying water of excellent quality. Another is now being sunk, and both will presently be worked by steam. Water storage is as before in tanks, but when the storage dam is complete the town will be well and continuously supplied. At present we are too dependent on rains and the windmill at the borehole.

(b) and (c) The pail system is in use as before. Sewage is removed by contract. The Municipality should either do this work themselves, pay a higher contract price for it, or employ inspectors. The present system is moderately efficient only.

(d) No cases of overcrowding have been reported.

(e) and (f) As previously reported.

(g) Swine and cattle are kept in many yards near dwelling-houses. The Council have actively dealt with the only case of nuisance arising therefrom.

(h) The Native Location is well kept and healthy.

(i) Cemeteries are as before.

(k) I think the Council spare no pains to remedy and abate nuisances, and the general public are now beginning to aid their efforts, and understand their duty better in this respect.

(l) The hospital accommodation is still quite inadequate. As serious injuries have often to be treated in the gaol hospital (also used as a pauper ward), some further expenditure than the few shillings spent this year is urgently needed.

There is a nursing home in the town at which one "free bed" has been maintained for the past year. As the house is at present closed this bed is not at present available, and it is uncertain when (or if) it will subsequently again become so. Other hospital accommodation there is none.

(m) Infectious diseases.

Small-pox is treated, if in the Municipal area, in the lazaretto or temporary camp; if in the Divisional Council area, by local arrangement. All cases thus treated have recovered.

Enteric Fever.—A definite outbreak occurred in Molteno early in the year.

Vaccination.—All persons vaccinated at the various centres return home and are not seen again. Every centre, however, reported good results.

Unusual diseases.—Scurvy broke out at Sandfontein and Cape Collieries. It was entirely confined to natives. Both Mr. Blandy and Mr. Wilson (managers) carried out every suggestion I made, and the comparatively small number of deaths was undoubtedly due to their generous provision for the wants of the sick.

Sporadic cases were from time to time admitted to the gaol at Molteno. All these cases arose from the drought and consequent impossibility of obtaining fresh vegetables.

47. MONTAGU.

DR. JOSEPH W. CASTLES, DISTRICT SURGEON.

The public health duties performed by me during the year have been vaccinating the town of Montagu and district, and in advising the Municipal Council in sanitary matters.

(a) The water-supply on the farms is derived principally from mountain and springs, and is subject to the usual contamination of the open furrow.

The water-supply of the town of Montagu is all that can be desired, being brought from its source in the mountain in pipes, a distance of three and a half miles, and every house has its connection. The quantity is sufficient for all household purposes, and the Municipal Authority is now taking steps to increase the amount, to meet future requirements.

(b) There is no system of sewerage or drainage.

(c) Night-soil and household refuse are removed by Local Authority by contract, and the work is done satisfactorily.

(d) The dwellings of coloured classes are still in most cases only sufficient and barely that in some.

(e) Slaughter-houses, butcheries, and bakeries are satisfactory.

Dairies as such do not exist.

(f) The sale and storage of human food are satisfactory; conditions of preparation are unknown.

(g) Animals generally are well stabled.

(h) There is no location, but a portion of the commonage is set apart for the dwellings of the coloured classes, which are fairly orderly and clean, and the removal of night-soil is done by the Municipal Contractor.

(i) Cemeteries are outside the town in dry sandy soil, and, from a sanitary point of view, leave nothing to be desired.

(k) Premises are continually inspected by Municipal Officer and nuisances combated as they arise, but complaints are very seldom made.

(l) A small building has been lately acquired by the Municipality for reception of infectious cases, and is being prepared for use when necessity arises.

(m) Infectious diseases in district generally.

Two cases of Enteric were reported; one case in the person of a coloured male adult on the farm Derdeheuvel; onset about 12th July, 1903; cause unknown; probably drinking foul water in veld in his occupation as shepherd. The other case occurred in the town of Montagu in the person of a European male adult, who came here from Kenilworth ill. Both these cases recovered.

Diphtheria.—One case took place in Montagu in the person of a European male child, for which no cause could be assigned. Recovery took place.

Two cases were reported from outlying contiguous farms in the district. There was also one unreported case which proved fatal. This last contracted the disease at a farm in the Worcester district, and the others were contacts. The latter recovered.

There has been no outbreak of Small-pox. I vaccinated in the urban area 138 persons, and in the rural area 122 persons, all from lymph supplied by the Graham's Town Institute, and in all the cases inspected afterwards the vaccination was successful.

48. MOSSEL BAY.

DR. J. KITCHING, DISTRICT SURGEON.

(a) The water is brought from a reservoir in the neighbouring mountain through pipes, is received into a covered reservoir just above the town, and from there distributed through pipes. It is of good quality, and, so far as I know, is not exposed to any danger of pollution. There is sufficient for ordinary use, but not enough for the frequent flushing which is required for the open drains.

(b) There are no sewers. All the drains are open.

(c) Night-soil is removed at stated times. The bucket system prevails here, and there are no cesspools. The disposal of slopwater is not satisfactory, as a large quantity of it finds its way into the drains, and with the limited supply of water for flushing is occasionally a nuisance. Household and other refuse is regularly carted away from the houses.

(d) There are a few cases of overcrowding.

(e) The management of butcheries, bakeries, etc., is satisfactory; the slaughtering of animals takes place at a distance of about one mile from the town.

(f) So far as I know this is satisfactory.

(g) The only animals allowed in the town are horses and cows.

(h) The Native Locations are kept in good order. The only want for the more distant one, Tarka, is water, which, I think, should be brought nearer to the place. At the present time the people living there have to fetch their water from the pump, which is a mile distant.

(i) Nothing to report in regard to cemeteries and burial grounds.

(k) There is a Sanitary Inspector, who is an able and energetic man, and does his utmost to minimise nuisances.

(l) There is a small isolation hospital at the Point, which would accommodate about four cases; this belongs to the Municipality.

(m) In my last report I referred to the prevalence of Enteric Fever. This continued through the early months of the year—the last case occurring in May, and from that time until December there were no cases, but two cases appeared during the last-mentioned month.

There were a few scattered cases of Diphtheria during the first six months of the year, the first that I have knowledge of was in the month of January, at a farm about three hours' drive from here. During May, June, and July German Measles was general, and during the past six weeks of the year Dysenteric Diarrhoea was prevalent, affecting both adults and children. The cases, however, were not severe.

49. MURRAYSBURG.

DR. WALTER WATKINS, DISTRICT SURGEON.

As District Surgeon I continued the general vaccination in the district, which I commenced late last year (1902), and as Medical Health
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Officer I continued to examine and vaccinate all incoming natives when necessary.

The general state of the public health and sanitation has been very similar to that of the previous year.

General farm to farm vaccination was performed, and a total of 951 cases were vaccinated, including those I did at the end of last year, averaging at 1s. 4d. per head. This system of farm to farm vaccination is much more efficient than simply vaccinating at certain centres. Formerly, when I vaccinated at centres, notwithstanding the fact that I went out of my way and vaccinated at farms *en route*, the number only reached 109 at a cost of 5s. per head.

The Contagious Diseases Prevention Act works well here. There has been an increase of the number treated, probably consequent on the late war. The hut for the accommodation of such cases is too small, and, owing to its dilapidated state, has been repeatedly condemned and a new building promised.

There has been no case of Leprosy.

The number of paupers is diminishing.

(a) Little remains to add to my previous report. The new furrow is now in use, but it does not increase the supply of water, which remains in the same unsatisfactory state.

(b) The drainage water is allowed to run off into the street water-furrows.

(c) The cesspool system generally is in use. Household slops are deposited at random about the houses, or into the gardens, but in a few instances care is taken, and holes are dug in the gardens for the reception of slops. The Municipal Council now undertakes to clear away the refuse matter on to the common.

(d) Many of the smaller houses or huts have been placed in a better condition. There appears to be no overcrowding.

(e) and (f) It appears that animals are allowed to be slaughtered at any house, and the flesh placed for sale on the public market. There are three butchers who sell their meat. My attention has been called several times to the state of meat, which has been sold in a state of putrefaction, and it appears that the police cannot act in such matters, as there is no Municipal bye-law to give them the power.

(g) The few cows, which are kept for dairy purposes, run in the veld during the day, and are brought into the owners' yards at night. Swine are scarce in the village.

(h) The Native Location has been better looked after by the Municipal Council, and is now kept in a fairly clean condition.

(i) Same as before.

(k) Nil.

(l) There is no hospital for infectious cases. Several cases of Diphtheria occurred amongst persons whom it was impossible to isolate, and the Municipal Council flatly refused to move in the matter, nor would they provide anti-diphtheritic serum in such cases.

(m) Diphtheria has been prevalent, twenty-seven cases having occurred. This was not an epidemic, as the cases occurred throughout the year. Sometimes one isolated case would occur, and at other times, when the patient could not be properly isolated, several would be affected at the same house.

There have been five cases of Typhoid; two of these were probably contracted elsewhere, one at Victoria West, and the other at Jacobsdal.

One case of Small-pox occurred in the district. The Divisional Council were approached in the matter, but did not act in a rigid manner.

Fortunately the case occurred at a hut away in the veld. The patient was quarantined and the other inmates of the hut were vaccinated and requested to remain at the hut. The disease did not spread, and originated probably from a contact from Beaufort West.

Epidemic Pneumonia broke out at Tooverfontein, twelve miles away from the town, where there are four farm houses adjoining. Six cases occurred.

No case of Plague has occurred, and no precautionary measures have been taken in any form.

50. NAMAQUALAND.

(i) NAMAQUALAND.

DR. M. W. COWAN, DISTRICT SURGEON.

The villages included in my report are those of Springbokfontein, O'okiep, Concordia, Nababeep, and Steinkopf. There are other small centres of population in the district, but these are sparsely inhabited.

(a) Water-supply.—I went into this subject rather fully in my last annual report, and have nothing to add to it. The condition of the water-supply of all the villages save Steinkopf is satisfactory as regards sufficiency and purity at source and delivery.

Under the conditions of life at Steinkopf it is difficult to see how matters there can be improved on; it is more a question of educating the natives on the subject of drinking water.

In the bush veld between the villages and the Orange River there have been several cases during the last year of people being found in the last stage of exhaustion from thirst. These have included natives, colonial born whites, as well as new comers. In some of these parts water is authoritatively said to lie close to the surface requiring only a few shallow pits to be dug to reach it.

Could the Government sink only three or four wells on the principal long roads it would confer an immense boon on the farmers of the district and on other travellers at a very small cost.

(b)—(k) On these subjects I have nothing to add to my remarks of last year. These points are generally well looked after in the district. In Springbokfontein they are looked after by the Government Officials, and in the larger mining centres by the Mining Companies and their Medical Officers.

(l) There is no hospital in this district for the isolation and treatment of infectious diseases.

In the epidemic of Small-pox, camps were formed for the isolation and treatment of cases. These answered well.

(m) Sporadic cases of Typhoid and Measles have occurred, but there has been nothing approaching an epidemic of these diseases.

There has been no Diphtheria.

Small-pox.—On the 10th of June Dr. Storrs, of Concordia, drew my attention to the first case of Small-pox which occurred in this district. The case was infected through a child. The child and its mother had come up from Port Nolloth, and visited the house in which this native patient lived for about a week. The child had had Small-pox at Port Nolloth, and the rash was still present on its arrival at Concordia.

The affected man was at once carefully isolated. About three more cases occurred in Concordia, one of which at least was due to fresh infection from Port Nolloth.

On the 12th June another case occurred in Nababeep (the first there); this occurred in a person who had shortly arrived from Port Nolloth.

In Nababeep, in spite of isolation, the disease quickly spread, the place being in constant touch with Port Nolloth, and Port Nolloth was very extensively affected with it. The patients were isolated in a camp about two miles from the village, and were supplied with food by the Divisional Council.

Throughout the whole district the disease was of a particularly mild type, and, although some of the cases were exceedingly ill, there was not a single death. Marked pitting (permanent) took place in about ten per cent. of the cases. Occasional cases still occur in Nababeep.

In O'okiep only one case occurred.

At Klipfontein, a small station on the railway line from Port Nolloth, about six cases occurred together, and then the disease suddenly stopped there.

Altogether throughout the epidemic there were five Europeans attacked, and between sixty and seventy native cases were reported, although many of the slighter cases no doubt escaped observation.

Vaccination was, of course, carried out in all the affected villages. The prevalence of Small-pox in Nababeep, I believe, was due to the large number of unvaccinated natives there working in the mines. O'okiep and Concordia have always been well vaccinated centres, but Nababeep contains a large number of raw natives who have never been vaccinated. These people are by no means easy to get at either. I recommend that during the present year each centre of population in this district should be vaccinated, two or more clear days being given to the larger centres.

(ii) SUB-DISTRICT OF GARIES.

DR. R. VERNON, ADDITIONAL DISTRICT SURGEON.

During the year 1903 the general health of the Garies district has been satisfactory, no epidemic of infectious disease occurring. Small-pox, which was prevalent in the adjoining district, did not break out here. Vaccination was, on the whole, successful, as far as I could hear, 223 cases in all being vaccinated. No cases of Leprosy have been brought under my notice. The native population is remarkably free from venereal disease. While vaccinating at Namaroep and Leliefontein I could not discover a single case of Congenital Syphilis. One case of Diphtheria occurred in the village, which was successfully treated with diphtheria antitoxin.

(a) The danger of the water-supply becoming polluted, remains much the same as last year, many persons relieving themselves in the river bed.

(b) No system of sewerage and drainage exists.

(c) The inhabitants of the village make their own arrangements for disposal of night-soil.

(d) No overcrowded dwellings exist. The native huts are of the usual description.

(e) There are none.

(f) The sale and storage of human food leaves nothing to be desired.

(g) No swine are kept in the village at present. Cattle and horses are well looked after.

(h) There is no Native Location.

(i) Same as last year.

(l) No hospital accommodation exists in the district for the treatment of infectious disease.

(m) During the year two cases of Enteric Fever occurred in the village, and one at a farm in the district.

51. OUDTSHOORN.

(i) OUDTSHOORN.

DR. GEORGE RUSSELL, DISTRICT SURGEON.

In presenting the report for 1903 it may be stated that no great epidemic of any disease made its appearance in town or district during the year, yet it must be added that cases of Diphtheria occurred not only in the town, but through the whole district; also Scarlet Fever or its varieties appeared, but there was a complete absence of any tendency to a virulent form. Spinal Meningitis made its appearance in isolated cases; and there was a general run of Typhoid Fever in town and district. During the last quarter of the year there appeared an epidemic form of Colic and Diarrhœa, but no cause could be brought forward, and it gradually disappeared.

(a) The water scheme has been completed, the total capacity being 500,000 gallons per diem, but the distribution of the supply to the various sections of the community is imperfect. An attempt to remedy this has been proposed by the Council, and they have brought forward an extended scheme for the town service, which, if carried out, will greatly assist the outlying portions of the Municipality in obtaining a household supply. The farm on the Zwartberg Mountains, where the water is obtained, is being fenced in, but the pool at the farm for the in-take is not cemented out, nor are there any means provided for its flushing or cleansing. It is to be hoped that the Council will be able to build a small storage reservoir on the farm at an early date, with the necessary filter beds, so as to prevent the flow of suspended matter into the system of pipes, and thereby interfering with their carrying capacity.

The water-supply of the farm-houses and their inhabitants is certainly improving. A large number of the more recently erected buildings have iron roofs, and the water from these is stored in tanks for household purposes. The supply may be limited in some cases, but the storage room is certain to increase as its advantages become apparent, and thus enable the supply to be continuous during the year. The fact that the farming population are beginning to realise that disease is so easily spread by water is causing them to make arrangements for the storage of rain-water, as at present it is impossible for many of them to obtain a pure supply of water in the dry season from the streams and rivers in their locality. The sanitation of the farm-houses and the position of the kraals are also receiving attention in many parts of the district, but the great question is a means of assisting or supplying the coloured people of the district with pure water for household purposes.

(b) There is no drainage or sewage scheme.

(c) The collecting and the disposal of night-soil have now been taken over by the Municipality, and are very good; this also applies to the slop-water and household refuse.

(d) The dwellings of the lower classes of the inhabitants have improved, yet there are certain sections of the town requiring the attention of the Town Authorities.

(e) Public slaughter-houses have not been erected, but they are to receive the attention of the authorities at an early date. The bakeries and dairies are very primitive.

(f) Milk is still sold in bottles, but others again carry the milk in covered cans from house to house, and at each place the measure is dipped into the milk and emptied into the utensil presented. The sale of fish

and its storage should have the attention of the authorities, and if it be possible that Consumption and Leprosy can be spread from the use of diseased or decomposed fish, a regulation should be made regarding its storage and sale. The sale of home-made gingerbeer, fruit, and fish, can be carried out without a licence, the shops, etc., being subject to the visitation and inspection of the Sanitary Officials.

(g) The Keeping of Cattle, Swine, and other Animals.—All kraals within the boundary of the Municipality have to receive the sanction of the Council. At one time swine could only be kept under a licence, but this has been abolished, which is a retrograde step as regards sanitation.

(h) The Native Location is in the same condition; several of the half-demolished buildings are being used as cesspools. The place has no water-closets or other convenience, and carts for the removal of night-soil and slops are conspicuous by their absence. The Council draws about £16 per month from these huts as rent, and any labourers who work for the Council get a rebate on the rents paid.

(i) Cemeteries and Burial Grounds.—Several years ago a cry was raised that the burial grounds were becoming crowded, and were situated in the centre of the town. Although the authorities have had a section of the commonage set by for this purpose, burials are still regularly taking place in the old crowded grounds.

(k) The Abatement of Nuisances Generally.—There is a house-to-house visitation by an inspector, and all nuisances are reported to the authorities, and to the occupier, as well as to the owner of the premises. There can be no doubt that the general condition of the town has greatly improved.

(l) Hospital Accommodation.—There is a Royal South Western Hospital under a board of management, but there is no provision for the treatment, or isolation, of any infectious or contagious disease.

(m) During the early months of the year it was reported that Small-pox had made its appearance amongst the natives working on the railway line. On the 26th May, 1903, a certain Kafir, named Baasjan, who had been sick at Dysselsdorp for some time, was ordered by the Police to report himself here, and they considered him to be suffering from Syphilis. It was found to be a case of confluent Small-pox, and the matter being reported to the authorities, immediate steps were taken to have him and his family isolated and treated. The Kafir appears to be a doctor and fortune-teller, and, no doubt, picked up the disease from the camps along the line, as he was known to visit them frequently. His household consisted of a wife, who had been vaccinated, and two sons, who, with the father, had not been vaccinated. About a week previous to his coming into town one of his sons left home for Matjes River, to reside there with his aunt, and there became a centre of infection. The father and son who came to Oudtshoorn both contracted the disease, but the mother, although she nursed them during the whole sickness, did not become infected. They were discharged from the camp on the 10th July, 1903. On the 5th June, 1903, it was reported that Small-pox had broken out at Matjes River, and there the son of Baasjan was found suffering from the disease. He was living with his uncle, but as they had all been vaccinated, they so far had not contracted the disease. Shortly afterwards two of the children fell sick. The household consisted of father, mother, and ten children, with the visitor Baasjan. Of these the latter was the only one of the household who had not been vaccinated. The camp was broken up on the 16th July, 1903; there were no deaths at either camp.

The total cost of both camps was £354 5s. 8d., which included the expenses incurred in vaccinating over 7,000 people, but, if to that amount

is added the sum spent in vaccinating the district, we get a total cost of about £390. The total number of persons vaccinated during the year was 9,021, and, if it is considered that vaccination is one of the essential points to prevent the spread of the disease in any locality, it must also be included as one of the principal features in the expenditure. The total cost of the treatment of patients, as well as that of vaccinating the district, was £390, and, if divided by the number vaccinated, we get an average cost of 11d. per case, but, if we take the actual cost of vaccinating 9,021 of the inhabitants of the town and district, then the cost is about five for a shilling. The total distance travelled during the vaccination tour was over 488 miles, and the remuneration received for personal and cartage allowance was about 1s. per mile. It is impossible to give any account of the success of the vaccinations performed, as no opportunity was given to revisit the vaccination centres, but so far as could be made out from careful enquiries, the lymph supplied by the Government gave excellent results.

To all appearances the Village Management Board of Dysselsdorp seems to be taking little interest in the general condition of that place. The streets and side-sluts are in want of attention, and the dam, and the surroundings of the springs, should at least be kept in a sanitary condition. At a small expense one of the fountains could be cleaned and cemented out, and by means of a short pipe the water arranged so that a pure supply could be obtained for household purposes, the over-flow water passing into the storage dam for irrigation purposes. The gradual disappearance of the water-closets in the village, which were erected during Martial Law, shows plainly that the ruling boards are negligent in carrying out their work of sanitation. The school-house has recently been enlarged, and the average attendance of scholars must be high, but the conveniences, if any, are of the most primitive character, and the grounds, like those surrounding the church, are the veld and unfenced.

(ii) SUB-DISTRICT OF CALITZDORP.

DR. LAURENCE F. McDOWELL, ADDITIONAL DISTRICT SURGEON.

(a) The water-supply is derived from water furrows, and a few inhabitants have large tanks for catching and storing rain-water. The water-furrows, under the management of the Village Management Board, are kept far cleaner than formerly, and any cases of pollution are severely dealt with.

(b) There is no sewerage or drainage scheme.

(c) Nightsoil is disposed of by the bucket system to a safe distance outside the village. Household refuse is also removed at regular intervals.

(d) Overcrowding is diminishing except amongst the very poorest. I have seen no houses unfit for human habitation.

(e) These are conducted in a satisfactory manner.

(g) This is often a cause for complaint at night, but as there is no night official it is difficult to remedy, and animals, especially donkeys, and occasionally pigs, stray round the streets.

(h) No location exists, and the houses of coloured people in the village are in a satisfactory condition.

(i) These are fairly well looked after.

(k) The formation of a Village Management Board has greatly assisted in the abatement of nuisances, and, as far as their funds allow, the Board are doing their best to improve roads and furrows, and seeing that yards and latrines are kept in a sanitary condition. A few of the more ignorant inhabitants would like to retain cesspools; they argue that it is the old

custom, and, therefore, best, but possibly the small additional charge incurred has something to do with it, and to their objections to improvements.

It is to be regretted that the "Nels River Scheme" has been *in statu quo* for the last five years, as with its completion there would always be an abundant supply of good water, and it would greatly increase the amount of arable ground.

(m) There have been no cases of Small-pox, but I consider that systematic vaccination should be carried out in the district and in the village. No public vaccination was performed in this sub-district during the year.

There has been decidedly less Enteric, but still an alarming amount of Diphtheria, which can only be satisfactorily accounted for by isolation being quite impossible in the large majority of cases, and the difficulty the ordinary civilian has in understanding that the disease is still infectious for some time after the improvement of the throat symptoms.

52. PAARL.

(i) PAARL.

DR. A. KRAKOWSKY, DISTRICT SURGEON.

(a) The water-supply is good at its source and delivery, and is sufficient for the present need, but many people still make use of other sources such as the Berg River, wells, springs, and those sources are often polluted. If the whole of the district had to be supplied by the Municipality the supply would be insufficient.

(b) Very little has been done in the past year towards the improvement of the drainage and sewerage, and both demand great improvement.

(c) Night-soil, slop-water, household and other refuse, are for the greater part disposed of in the open sluits.

(d) Overcrowding is still going on to an alarming degree amongst many of the coloured population, and many dwellings on that account, and on account of the filthy state these people live in, are unfit for habitation and ought to be condemned. Unless the Municipality take stringent measures, we may expect a great increase in infectious and contagious disease.

The total number of deaths found at *post-mortem* from Phthisis Pulmonalis and general Tuberculosis during the year far exceeded that of 1902, and is, in my opinion, attributable to the overcrowding and uninhabitable state of many dwellings. The filth these people live in and the laziness of the coloured people in not white-washing and cleaning their houses and the surroundings of their dwellings, is a source of great danger to the public. I have found the smell in many of these houses so bad that people, who have accompanied me, have mistaken the smell for that of corpses far advanced in decomposition.

(e) The management of butcheries, bakeries, and dairies is still the same as last year.

(f) The keeping of cattle, swine and other animals is the same as last year, and I would make the same recommendation.

(h) There are no Native Locations in the district.

(i) The cemeteries are the same as last year, and are in a satisfactory condition.

(*l*) A building has recently been erected at the far end of Van der Poel's Plein, near the river, where there is at present one patient suffering from Small-pox. In this place it is intended to isolate cases of infectious disease.

(*m*) Typhoid Fever was raging in the summer months; Diphtheria was prevalent, and there has also been an outbreak of Small-pox in five different places in the district. The Municipality cleans and flushes the open sluits, but unless the night-soil, slop-water, household and other refuse be removed from the whole of the town, overcrowding be put a stop to, the keeping of animals only be allowed where the owner has a large extent of ground, and general cleanliness be enforced amongst the coloured population, these diseases will continue to increase from year to year, and so also increase the death-rate.

The total number of vaccinations in 1903 was 1,283.

(*ii*) SUB-DISTRICT OF WELLINGTON.

DR. G. D. MALAN, ADDITIONAL DISTRICT SURGEON.

On the whole the health of the people of Wellington and district has not been good during 1903. It is difficult to get reliable data, but, estimating the population of the town at 5,000, half of which are coloured, the mortality has been as follows:—Europeans—Adults, 12; children, 20, or 12·8 per mille. Coloured—Adults, 32; children, 49, or 32·4 per mille. I have not been able to obtain the figures for the country wards, but, roughly speaking, I should put the country mortality of all classes at about fifteen to sixteen per mille. The large difference between the European and coloured mortality I attribute to the better housing and feeding of the former, and the more intelligent way in which they rear their children.

(*a*) As regards the condition of the water-supplies of Wellington, I have nothing to add to my last year's report. Our water has stood a severe test during the year; inasmuch as we had a severe epidemic of Typhoid Fever, but not a single case could be traced to the drinking of water supplied by the Municipal reservoir.

(*b*) No system of sewerage and drainage exists here.

(*c*) Night-soil is efficiently and well removed by the Municipality. Slop-water is thrown into the yards, gardens and the river passing through the town; household and other refuse is removed by the householders themselves as best they can as no organised system of removal exists.

(*d*) In the coloured quarter of the town there are several overcrowded dwellings, and during the epidemic of Small-pox the Local Authority made an abortive attempt to improve matters, but things have since drifted into their old state.

(*e*) Slaughter-houses, butcheries, bakeries, dairies and other trades affecting health are well conducted, but I should certainly recommend the closing of all slaughter-houses in the village, as these may at any time become a source of danger.

(*f*) The sale, storage, and preparation of human food is properly conducted; no complaints have been made to the Local Authority.

(*g*) Cattle, swine, and other animals are properly kept, the Municipality having stringent regulations in this respect, which are duly enforced.

(*h*) There are no purely Native Locations in Wellington or district.

(*i*) Cemeteries and burial grounds are in good order.

(*k*) Nil.

(*l*) There is no hospital accommodation of any kind in town or district.

(*m*) During the year the under-mentioned infectious diseases made their appearance :—Measles, Whooping Cough, Mumps, Diphtheria, Typhoid Fever, and Small-pox.

Taking them in the above order.

Measles was introduced here, probably from Stellenbosch. It made its first appearance in the village in July, and gradually spread throughout the town and district, the last case I heard of occurring towards the end of December. It was of a very mild type and occasioned few deaths; thus, in my own practice, I saw several hundred cases, but not one proved fatal.

Whooping Cough.—This disease was first noticed in August in some children on a farm in the Wagonmaker's Valley, whence it spread all over the district, and at the present moment it is still raging. It was spread by children attending school whilst having the disease. It also was mild in type and caused few if any deaths.

Mumps.—During the latter half of the year several cases of this disease came under my notice, but I do not know of any deaths from that cause.

Diphtheria.—Of this disease there were several sporadic cases throughout the year, but it hardly ever assumed an epidemic form, the only outbreak of any magnitude occurring in six pupils of the local Poor School. The source of infection was undoubtedly one of the Concentration Camps in the Orange River Colony, as the first case had shortly before come from there. Owing to prompt isolation and the injection of anti-diphtheritic serum the disease was arrested and it never spread beyond the one house.

Typhoid Fever.—In September I saw the first case of this disease in my practice, and up to the end of the year had twenty-two patients under treatment, of which eighteen were in the district and only four in the village. All the cases outside could be traced to the drinking of impure water from open furrows, eleven cases occurring in houses using the same water-supply. Of the four in the village, all admitted drinking water other than that supplied by the town reservoir. None of my cases proved fatal, but I have heard that a few deaths from the disease have been registered. As far as the Local Authorities are concerned, I have not learnt that they did anything in the way of preventing or suppressing the outbreak.

Small-pox.—On the 17th February a case of Small-pox was reported at Hermon Station in this district. The patient, a native male adult, had not been away from the place, and it was difficult to trace the way in which he had contracted it. He was at once isolated in a tent and all contacts were vaccinated. He himself had been vaccinated two years previously. A few days later another case was discovered, and in all there were five cases, all coloured adults, three previously vaccinated, and two unvaccinated. The last case was discharged on the 17th April, 1903. There were no deaths, and during the treatment of the cases, I received every assistance from the Divisional Council, the Local Authority concerned.

On the 6th March a case of Small-pox was discovered in a house in Wellington inhabited by 69 coloured people. In this instance the patient was a coloured adult woman, who had come from Porterville shortly before, where, according to her statement, she had been in contact with people who had an "eruption." She was immediately isolated, while all the people in the house, as well as all contacts, were vaccinated. A thorough search was made for more cases, and three others were discovered a few days afterwards. In all there were six cases, the last one being discharged on the 16th April, 1903. Of the six, three had been

previously vaccinated, while three were unvaccinated. All were isolated in tents far away from any dwelling, all contacts vaccinated, and daily examined, and to this I attribute the stamping out of the disease. I again received every assistance from the Municipality, the Local Authority. During the year I vaccinated 211 persons, and, as far as I could ascertain, nearly all were successful.

53. PEDDIE.

DR. TEMPLE SMYTH, DISTRICT SURGEON.

(a) The water-supply is derived from rain-water collected from the roofs of buildings and stored in rock, or cement-bound underground tanks, or iron cisterns over ground.

The rainfall in 1903 was 32·91 inches. The supply of village drinking water only once became short.

The dangerous habit of using contaminated river water still exists, especially amongst the natives.

(b) Nil.

(c) No alteration since my last report. The bucket system remains unpopular. Cess-pool closets (in which deodorants and disinfectants are seldom used) are in vogue chiefly amongst the European community.

The native sanitary laws are still in their most primitive stage, but the Local Authorities of the district do not provide against them, and consequently open spaces of commonage in the precincts of the village are used indiscriminately as latrines.

(d) Nil.

(e) The trades affecting public health are, in my opinion, carried on in a satisfactory and cleanly manner.

(f) Nothing to remark.

(g) As before pointed out cattle, pigs, and other stock are "kraaled" too close to dwelling houses, either for comfort or cleanliness. The fly plague is an inevitable result.

(h) Well-managed under the surveillance of capable inspectors.

(i) Cemeteries are well-kept.

The natives bury their dead as of old, and the graves are deep.

(k) No remarks.

(l) No hospital of any kind exists for the treatment of infectious or other cases.

This I have repeatedly reported upon, but matters remain *in statu quo*.

Lepers are detained in the gaol precincts, or in the village, until such time as they can be forwarded to institutions for their reception, their stay here often extending into several weeks. This system is wrong, and would be discontinued if we had an Isolation Hospital.

The want of a Casualty Ward is keenly felt, by both Europeans and natives.

They will not, however, support the idea of a hospital raised by local voluntary subscription and backed by State aid.

(m) I treated thirteen cases of Enteric in the year, two of which proved fatal, but these cases exhibited repeated hæmorrhages.

Three of the cases, as far as I could ascertain, came from outside districts.

There were two cases of Diphtheria, neither of which were supported by microscopical diagnosis.

The first, a European, age seven, female, treated by anti-toxin, recovered; the second, a native infant, died, the serum treatment not being permitted.

A large and widespread epidemic of Small-pox also took place.

The first case, which I saw on the 6th April, had just arrived from Port Elizabeth.

The district became clear on the 16th November.

Generally speaking the disease assumed a remarkably mild form, although several cases of confluent variola did occur.

The total number of cases was 107, nine of which were Europeans.

The deaths were five, all natives, giving a total death-rate of 4.67 per cent. But this figure is not accurate as, I believe, deaths occurred which were not reported, owing to the great dread the natives have of quarantine.

The Divisional Council was the Local Authority in control of the epidemic.

The only criticism I should like to advance in the conduct of the epidemic, is the extreme tardiness as regards payment of officials, guards, etc.

The services of native guards were in many cases difficult to obtain, and there was a great deal of dissatisfaction amongst these men at having to wait from, in some cases, five to seven months before any remuneration was forthcoming.

My special reason for reporting on this matter, is to prevent its recurrence in the future, as the services of guards will be even more difficult then, than now, to secure.

Vaccination was thoroughly carried out from hut to hut, round each focus of infection, as well as at the special centres sanctioned by the Resident Magistrate.

The total number of vaccinations was 7,280.

The lymph used was obtained at Graham's Town, and its quality was excellent, results being highly satisfactory.

54. PHILIPSTOWN.

(i) PHILIPSTOWN.

DR. W. H. G. HUTHWAITE, DISTRICT SURGEON.

The general health, both for the town and district, has been exceptionally good during the year. We have experienced an unprecedented drought, the rainfall for the whole year only amounting to 4.84 inches.

(a) The water-supply is still in the same unsatisfactory state as reported in previous years; but, I am pleased to say that the Municipality are discussing a scheme which, if brought to a consummation, will result in a great improvement of this important question.

(b) There is no scheme of drainage or sewerage in Philipstown.

(c) The night-soil is disposed of by the bucket system, the collections being regularly made, but many of the inhabitants are very careless with regard to this matter, allowing their buckets to remain far too long without being emptied. It would be much more satisfactory if the Municipality were to undertake the removal of the night-soil regularly from every house, and impose a small general rate, sufficient to meet the cost of same.

No arrangements have been made for the disposal of slop-water, which has to be thrown into the streets, or back-yard.

This obnoxious practice is probably responsible for the enormous number of flies with which this town is plagued during the summer months.

(*d*) There is a certain amount of overcrowding, but not very much. The Municipality does not seem inclined to take any action in the matter.

There are also a few houses unfit for habitation, but what I would more especially call attention to is the fact that the Municipality has no regulations for the control of the erection of dwelling-houses or other buildings, consequently owners of small plots of land are erecting houses, the rooms of which are in many cases far too small for health requirements. In a few cases mere hovels have been erected, consisting of one room, with mud-floors and very low roofs, quite unfit for human habitation.

I have addressed a communication to the Municipality calling their attention to the urgent need which exists for stringent building regulations, more especially in view of the fact that a portion of the town has recently been laid out in building erven, and that houses are being erected thereon which are undesirable, both from the æsthetic and sanitary point of view.

(*e*) There is only one slaughter-house and one bake-house, both of which are in a satisfactory condition.

(*h*) The Native Location is kept in a fairly clean condition. It is greatly in need of latrines, as nothing of the sort is at present provided.

(*m*) There have been no outbreaks of Zymotic Disease during the year, the only cases of infectious disease being notified were three of Enteric Fever, and two sporadic cases of Scarlet Fever, one occurring in January on a farm about twenty miles out of the town, and one in April in the town. Towards the end of the year, chiefly in December, there were a large number of cases of Dysenteric Diarrhœa, including both adults and children, white and coloured; the mortality was proportionately small, and chiefly confined to coloured children under five years of age.

(*ii*) SUB-DISTRICT OF PETRUSVILLE.

DR. D'ARCY WILLIAMS, ADDITIONAL DISTRICT SURGEON.

(*a*) The water-supply, as I stated in my last report is good, and coming as it does from outside the town and above it, is in no way contaminated. Lately pipes have been laid down which convey the water from its source to various parts of the town. This is a great convenience, and does not in any way interfere with the purity of the supply.

(*c*) The disposal of night-soil is satisfactory, as it is deposited at a proper distance from the town, and so does not in any way interfere with the general health.

(*e*) The slaughter-houses, butcheries, bakeries, dairies, etc., are clean and kept in a sanitary condition.

(*g*) The animals which are stabled in the town are well looked after and cause no annoyance, being kept in a cleanly manner.

(*h*) The Native Location is clean.

(*m*) The general health of the town for the year has not been good, disease being much more prevalent than last year. There have been several epidemics during the year, viz., Influenza, Scarlatina, Dysentery and Whooping Cough. The Influenza and Scarlatina were brought over in some way from Philipstown, as that town was visited by these two diseases some little time before the outbreak occurred here. The Influenza and Scarlatina were chiefly confined to the town, there being very

few cases in the country. The Dysentery was also more prevalent in the town than in the country, and of a severer type. The Whooping Cough began in a mild form, but latterly many of the cases have been complicated with Bronchitis and Pneumonia. One death occurred from Scarlet Fever complicated with Acute Nephritis. This was a native child living a little way out of the town. Three deaths occurred from Dysentery. These were white people and in each case were over fifty years of age and of the poorer class. Elderly people, especially amongst the poor, and children, when attacked, suffered from the disease more severely than the middle-aged. There are a few cases of Dysentery still remaining, but it is gradually dying out since we have had good rains. I consider that the chief cause of the Dysentery was the severe drought, and the fact that amongst the poorer class of the population, as the meat (mutton) was so expensive, they lived chiefly on tinned provisions. I feel convinced that the water-supply was not in any way to blame. The Scarlatina began in a very mild way, and in one or two cases where I was not called till late in the case, the parents were unaware of the presence of the disease till the skin began to peel off. This, I think, accounts for the way in which the disease spread. It was mild throughout, and in only one or two cases were there signs of kidney troubles afterwards, excluding the Native child before mentioned who died. There were eleven cases of Scarlet Fever notified by me, but there were several others in the town I discovered later which did not come under my observation. All of these were very mild cases. The first case I saw was in June, and the last case at the end of July—the epidemic lasting about two months. There have been very few people vaccinated by me this year, as the town was so thoroughly done last year. The ones that have been vaccinated have been successful. There have been no cases of Small-pox or Leprosy during the year, and also no cases of Enteric Fever. Amongst the Natives there is still a good deal of Syphilis, both acquired and hereditary. There is no way of checking the disease at present, as most of them suffering from it do not undergo treatment, or if they do take medicine, are quite content with about one or two bottles. I strongly advise that a Lock Hospital should be started here for the natives, as that would be the only way of preventing the spread of the disease amongst them. There is a building here belonging to the Municipality, which was formerly the gaol, and would suit the purpose admirably. There are at present three paupers receiving relief from Government, one suffering from Chronic Rheumatism, one from Senile Decay, and one from Paralysis.

55. PIQUETBERG.

(i) PIQUETBERG.

DR. FRED. H. DOMMISSE, DISTRICT SURGEON.

The health of the district during the last year has been exceptionally good. The only epidemic worth mentioning was the so-called Small-pox epidemic. It originated at No. 5 Cottage, Railway Line, and, except for a few cases at the Mission Station and Elands Bay, it did not spread further. It was very mild in every way, and only seemed to attack the coloured people. There were no deaths from it. Typhoid Fever was conspicuous by its absence (the first time for three years); this is due to the regular supply of good rain water during the winter months.

A few cases of Typhoid Fever occurred in the village due to accidental pollution of one spring to the north side of the town; this has been rectified.

- (a) The water-supply is in perfect order.
- (b) Sewerage and drainage are still very imperfect.
- (c) The disposal of night-soil, etc., is still left to the individuals of the place.
- (d) Nil.
- (e) Slaughter-houses are being kept in fairly good order. One mineral water factory has already been reported on, and should be seen to from time to time.
- (g) Kraals still exist in the middle of the town.
- (h) It has at last been decided to have a proper Native Location, this is a great step towards improving the sanitation of the town, and I hope it will be seen to without delay.
- (i) In good order.
- (k) This is being seen to.
- (m) The small epidemics of Small-pox and Typhoid Fever have been checked completely.

Vaccination has been done very thoroughly and successfully this year, the number of cases being close to 1,000.

The lymph, which has been procured from Graham's Town, has been excellent; one out of every twenty cases being unsuccessful.

(ii) SUB-DISTRICT OF PORTERVILLE.

DR. FRANK P. BESTER, ADDITIONAL DISTRICT SURGEON.

Since my last report for the year 1902 the Municipality has been re-constituted under the new Act of 45 of 1882.

(a) Water-supply.—The water-supply still continues to be a source of trouble and danger to the community. The desirability of laying down pipes has oftentimes been pointed out to the Municipality, but to no effect. The Municipality has now enclosed a portion of the public drinking furrow running through a vlei, and where there is very little chance of water pollution, with a barbed wire fence, leaving the rest of the furrow open and exposed as before. The water, running from the mountain, is used at a farm, about three-quarters of a mile from the village, for milling purposes, and collects into an open furrow again. The furrow runs through the farm, and the water is freely used by servants for washing kitchen utensils, etc. Repeated reports have been made to the Municipality about this very undesirable state of things, and several cases (occurring inside the Municipal area) have been tried by the Magistrate for pollution of water by geese, fowls, pigs, etc., wallowing in the furrow, but up to the present the Municipality has taken no notice of the matter.

(b) Sewerage and Drainage.—Nil.

(c) Removal of Night-soil, etc.—This subject has been the cause of much discussion and dissension amongst the public. At present the obnoxious system of removal of night-soil, etc., in private gardens is still in vogue. Owners use their own discretion as to the cleaning of water-closets, and it is no uncommon thing to find a closet remaining dirty for three weeks or a month. Several of the properties have no water-closets at all on the premises. A public meeting was held during the year when it was decided to raise a loan and to start a sanitation scheme under direct supervision of the Municipality. It was decided to start

the scheme with the new year, but at the first meeting of the Municipality this year the matter was shelved again for an indefinite period. In my opinion the only way of improving matters is for the Government to force the Municipality to take active steps. A personal visit of the Medical Officer of Health for the Colony might perhaps be the means of stirring up the Municipality out of its lethargic state.

(d) Overcrowding of Dwellings, etc.—Nil.

(e) Management of Slaughter-houses, etc.—Fairly well managed. I have often advocated slaughtering-booths to be erected outside the village, but to no effect. At present the system in vogue is to slaughter at the Pound Kraal, or in private yards, and cart the carcasses to the slaughter-houses in wheel-barrows, or any other vehicle that is handy.

(f) Sale, Storage, and Preparation of Human Food.—Nil.

(g) Keeping of Cattle, etc.—Cattle, swine and other animals are kept by owners on their premises. The Municipality pays no attention to the cleanliness of back premises, and very often the cleanliness of such places leaves much to be desired.

(h) Native Location, etc.—Well kept.

(i) Cemeteries.—The cemeteries are under direct control of the Dutch Reformed Church. They are both well enclosed, and are supposed to be kept in order by the Church Authorities.

(k) Abatement of Nuisances, etc.—Looked after by local police.

(l) There is no hospital accommodation in the district.

(m) The past year has been entirely free from epidemics of Enteric Fever, Diphtheria, or Small-pox. Sporadic cases have occurred here and there. Epidemics of Measles and Whooping Cough occurred in the village during the year, and, although notice was given to the Authorities, no steps towards isolation were taken.

A very successful vaccination tour was carried out during the year. A large number of cases were vaccinated, and, as far as could be ascertained, the percentage of failures was very small.

I vaccinated at five different centres and did about 500 cases. About two-thirds were under ten, and of those mostly the coloured classes attended for vaccination. Children of a few months old are hardly ever brought up for vaccination, but, as I was not supplied with a list of births for the year, I was not in a position to report the matter to the Local Authority.

56. PORT ELIZABETH.

(i) PORT ELIZABETH.

DR. JOHN GEORGE UPPLEBY, DISTRICT SURGEON.

(a) The water-supply of Port Elizabeth comes from the Van Staaden's River Water Works, and with an average rainfall it suffices, but in time of drought the storage is insufficient. The Municipality live in the hope of an increased supply procured from sources other than that of Van Staaden's.

During the past year the rainfall has been sufficient, but not much more.

The Authorities have had to jealously watch any extra use on gardens and other means of beautifying the town.

The purity of the water-supply both at source and delivery is satisfactory.

(b) A complete sewerage and drainage service waits on an increased water-supply.

I can only reiterate my remarks in previous reports. Streets in many quarters of the town receive the slops from the houses abutting on them.

The befouling of the streets by dirt, filth, human and cattle excrement is a serious menace to the health of the inhabitants. I am convinced that one of the causes of Typhoid Fever, Dysenteric Diarrhœa, so-called Influenza, and other diseases in Port Elizabeth is directly due to dust carried over the town, dust laden with disease germs, filtering into the food supply.

(c) Night-soil.—The tub system is in vogue, the tubs being collected during the day and carried to outlying spots of the town where their contents are buried.

The Drift Sands should receive the night-soil of the town, the collecting and removal being carried on at night.

Slop-water.—A small portion of the town—The Hill—has underground drainage for slop-water. Where this does not exist slop-water is thrown on the streets.

Household and other Refuse.—This is deposited on the Drift Sands, where it is used up for reclamation purposes.

(d) The Chief Sanitary Inspector of Port Elizabeth in his Annual Report referring to overcrowding in Port Elizabeth, speaks of it “as a disgraceful condition of affairs. Matters are becoming worse, and will become worse still unless the insanitary areas and properties are closed and demolished.”

It is very little use to tell a community to abate overcrowding unless a remedy can be pointed to.

Two causes specially lead to overcrowding.

Certain people must live close to their work, and space is limited. Secondly, Asiatics will herd and pig together.

(e) Slaughter-houses.—No public abbatoirs exist. These are to be erected and should be taken in hand without delay.

Regulations for the use and government of the abbatoirs should also be drafted and promulgated, so as to save delay in the opening when they are ready.

Butcheries.—These are as dirty as the slaughter-houses.

Bakeries.—These are under Municipal supervision. Regulations are to be promulgated for their control.

Dairies.—I regret that I am unable to record any improvement.

Milk is dear, and in far too many instances, owing to insanitary conditions it is dirty.

The Sanitary Inspector keeps a close supervision on the dairies in the town, and intends prosecuting persons purveying milk who are not authorised to do so.

(f) A vigorous campaign was maintained by the Municipal Authorities against the sellers of unsound food, but their efforts are handicapped by defective legislation.

(g) The keeping of cattle, swine and other animals is supervised by the Municipal Authorities.

(h) A large portion of the native population has removed to the New Brighton Government Location.

Unfortunately a native free state has grown up outside the Municipal boundaries at Korsten, Dassies Kraal, and Elmslie's. Korsten and Dassies Kraal are practically under no supervision. The lazy, dissolute native lives at these locations in happy content. Fights continually take place, and drunkenness abounds.

I believe a Cape Policeman is occasionally seen at Korsten and Dassies Kraal, but he is simply out of it as regards maintaining order. There are no sanitary arrangements, and the veld is rapidly becoming polluted.

The inhabitants depend on the rainfall for their water-supply.

(i) Two cemeteries are in use, one at the extreme North End, and one at the South End.

The boundaries of the South End cemetery will require enlarging very soon.

(k) Bubonic Plague and Small-pox have been blessings in disguise, as the town in consequence has had a thorough cleansing.

(l) Hospital accommodation consists of the Provincial Hospital for general cases, Lock Hospital for cases under Part I. of the Act, Lazaretto, and a Private Nursing Home.

An isolation ward either at the Lazaretto or the Provincial Hospital is badly needed. No isolation hospital exists for the crew of ships arriving with obscure and undefined diseases. Sailors and others affected with Beri-Beri are refused admittance at the Provincial Hospital.

Morgues.—I would once again call attention to the absolute necessity for a public morgue; the only morgue for all cases of death necessitating an inquest is the one at the gaol.

A temporary morgue for doubtful cases has been in use at No. 2, Plague Office, but practically the only morgue is the one at the gaol.

Lunatics.—Pending their removal to an asylum, lunatics find accommodation at the gaol. This also should be remedied.

(m) Enteric Fever.—During the year 157 cases were notified, as against 213 last year. Europeans, 126; coloured, 31; males, 123; females, 34.

Diphtheria.—Twenty-six cases. Race: Europeans, 24; coloured, 2. Sex: males, 19; females, 7.

The lesser occurrence of this disease amongst the coloured and native races is somewhat remarkable, considering their surroundings of unwholesome soil, and of overcrowding.

Small-pox.—Ninety-eight cases. Race: Europeans, 23; coloured, 75; Sex: males, 63; females, 35.

Vaccination.—Number of individuals vaccinated 14,182.

(ii) NATIVE RESERVE LOCATION, NEW BRIGHTON.

DR. A. B. SIGISMOND POWELL, RESIDENT MEDICAL OFFICER.

(a) Water-supply.—The location receives the same water as is supplied to the town of Port Elizabeth, namely, from the Van Staaden's Reservoir. It is conveyed in three-inch temporary pipes, and the consumption is about 1,000 gallons daily. It is unsatisfactory at present, owing to a contamination from a preservative material lining the temporary pipes, and also owing to the fact that the Van Staaden's Reservoir has recently been undergoing cleansing operation.

These defects, however, will remedy themselves when the permanent water system, consisting of seven-inch cast iron pipes, is established.

(b) The surface drainage of the location is very good, there being a fall of about one in sixty. There is no sewerage system at present.

(c) The stercus system consists of an interchangeable bucket system worked by contract.

There is a daily service to registered residents and a bi-weekly one, or oftener, if necessary, to the white population.

The buckets are disinfected with Jeys' Fluid.

The full receptacles are carried out in special covered vans to the stercus pits, which are situated about one mile from the nearest inhabited dwelling, surrounded by bush, and consisting of gravel and sand ; each pit is twelve feet long by seven feet deep, and stercus is covered with six inches of sand daily.

Urine is collected in troughs in urinals, and discharged into 400 gallon tanks, which are emptied daily by portable suction pumps on wheeled tanks and conveyed to special pits.

Slop-water is collected in an ablution shed in tanks fitted with fixed wing pumps, and removed by portable tanks, which are allowed to discharge their contents on to the veld.

Rubbish is collected in bins, and removed by scotch-cart to special pits, where it is either buried or burned.

This system works admirable for a small population, but a water drainage system would be more suitable when the community becomes larger.

(d) There is no overcrowding.

(e) and (f) The food supply at the present time is mainly obtained from Port Elizabeth by train or road. There are no slaughter-houses or bakeries at present, arrangements have been made for their erection in the near future.

(g) No pigs are allowed in the location. Other live-stock is under the immediate supervision of the Inspector of Natives.

(h) The order and cleanliness of the location have been very good.

(i) Interments have been carried out in the Municipal cemeteries. A site for a local cemetery has been selected.

(k) All matters relating to the abatement of nuisances are referred to the Public Works Department. This course necessitates great delay, and power to act locally is urgently required.

(l) There is no hospital accommodation in the location as yet, and serious cases are sent to Port Elizabeth.

A temporary hospital is being equipped, while a permanent erection is in contemplation.

One case of Enteric has occurred during the year ; no source was traceable in this case.

An outbreak of Small-pox occurred in August last, fortunately, limited to two persons—strangers—and both unvaccinated.

The Divisional Council were immediately communicated with and took prompt action by removing the persons and disinfecting the premises. Fourteen people were kept under observation, but no fresh cases arose.

Two hundred and fifty-three persons were vaccinated or re-vaccinated.

No cases of Plague have occurred.

Owing to the healthy situation of the location the health of the natives, on the whole, has been extremely good, and no epidemics have occurred.

57. PORT NOLLOTH.

DR. NEVILL E. THOMAS, DISTRICT SURGEON.

As I was absent on leave from May 1st to October 31st, the observations in this report refer chiefly to the periods from January 1st to April 30th, and from November 1st to December 31st.

The Hottentot Location has been removed about a mile from the village with good effects as far as the better class inhabitants are concerned. With regard to the natives themselves, their huts and belongings are as filthy as ever and the infant mortality amongst them is very heavy. They get drunk on every available opportunity, and brawls and fights are of frequent occurrence. For this state of affairs there is apparently no remedy.

A large number of donkeys wander at will all over the village; this is a nuisance which I think should be put a stop to.

During my absence, there was, I understand, an outbreak of Small-pox, affecting a very large number of persons, but of a very mild nature and with, I believe, no deaths. I am unable to give any details, as no record was kept of the number of patients, but I find that vaccination was carried on vigorously, no less than 756 vaccinations and revaccinations being done, of which 621 proved successful. The epidemic has been quite stamped out, and there have been no cases since my return on November 1st, and I believe the last case had been discharged some time previously.

(a) There is unlimited brack water from the Five Mile Station and a certain amount of rain water collected in tanks.

(b) None.

(c) As before.

(d) There is no overcrowding except in the Hottentot Location. See remarks above.

(e) All slaughter houses are well managed and are situated one and a half miles from the village.

(h) See remarks *re* location.

(i) The new cemetery is not yet in use; the present one is overcrowded.

(k) A large amount of refuse used to be thrown on the beach; this has been stopped and a truck has been supplied for the deposition of rubbish; this is emptied daily into the sea.

(l) There is no hospital for infectious diseases. Should there be any necessity, temporary buildings would be erected.

(m) There has been no case of Enteric Fever or of Diphtheria. With regard to the epidemic of Small-pox see previous remarks, also as regards vaccination.

58. PRIESKA.

DR. J. S. GIBBONS, DISTRICT SURGEON.

The past year is noteworthy for the exceptional severity of the drought, but the general health of the district does not appear to have been much prejudiced thereby.

One hundred and fifty-four births were registered—82 European and 72 Coloured.

The deaths numbered 115. Those certified were 44, including three cases of Diphtheria, four of Simple Continued Fever, four of Pneumonia, and one each of Influenza and Phthisis. Among the uncertified deaths four were attributed to Diphtheria—probably correctly.

(a) Water-supply.—An improvement has been effected by the filling in of a large depression above the intake pipe where formerly filth accumulated. On the whole, the condition of the water-supply is very satisfactory, and the chance of contamination but slight. The fencing-in of part of the catchment area should be taken in hand.

(b) None.

(c) Done by the Municipality in a satisfactory manner, except that slop-water is not removed.

(d), (e), (f), (g), (h), (k) As in previous report.

(l) None.

(m) Diphtheria occurred sparingly throughout the district, eight cases being notified. In January several cases occurred near the Hope Town border, introduced apparently by visitors from the Middelburg direction. In May a case was notified in Stuurman's Ward; the disease seems to have been rather prevalent there for two or three months, but unrecognised. In the village one case was notified in May and one in November, and there appears to have been one other case not under treatment. There was a good deal of visiting among the country people on the termination of the war, and it is certain that the disease was introduced from other districts and carried from house to house. No steps were taken by any public body to suppress the disease, as the epidemic was trifling and the difficulties in the way of compulsory isolation very great.

An epidemic of Scarlet Fever of a very mild type prevailed in the village from February to June, some forty cases being notified, inclusive of two or three in the country.

On June 25th a native in the location was certified as suffering from small-pox, and on the 27th a second case, and on July 8th a third.

The first was convalescent when seen by me. The other two were very trifling cases and greatly resembled Varicella, then prevalent; one case was pre-vaccinated, and the other unvaccinated. The source of the outbreak was not traced. A lazaretto was put up by the Municipality, and the two cases, with a few contacts, kept there until their discharge on 31st July.

One slight case of Scurvy was seen in December in the person of a coloured pauper.

59. PRINCE ALBERT.

(i) PRINCE ALBERT.

DR. R. STEVENSON, DISTRICT SURGEON.

(a) The water-supply is derived from springs at the top of the Swartberg, and at its source is plentiful and of excellent quality. In its passage to and through the village it is so polluted as to be absolutely unfit for drinking purposes unless previously boiled. From its source in the mountains it runs in an open furrow to and through the village, and this furrow not being enclosed in any way it is an everyday occurrence to see animals of all kinds grazing on its banks and defecating and micturiting in the stream. During the year one dead decomposing ox and the body of one coloured boy have been taken out of the drinking water near the village. There is an outspan at the first drift beyond the village, and although its use has been prohibited, the regulation has not been carried into effect, consequently the water is here much polluted by donkeys and oxen. From this point the furrow runs alongside and below the level of the road, and so whenever it rains large quantities of filth-laden matter are washed into the furrow, and this is the chief cause of pollution. When the furrow is empty, as it is on certain days, the bottom of it is covered with pieces of paper, leaves and decaying matter of all kinds which have been blown or washed into it. The sides and bottom of the furrow are paved with large

stones. During the latter part of the year there were many cases of Dysentery, and I attribute this outbreak to the bad drinking water. There will never be any improvement until the water is put into pipes, and this ought most certainly to be done. The expense would not be very great, and the boon to the public enormous. The pipes ought to be laid from a point above the village, where the purity of the water is certain. Meetings of the public have been held at different times, and a scheme approved of, but either through disagreement or apathy on the part of the Municipality it has never been carried into effect. The whole desire seems to be to have more water, a good supply of drinking water being altogether a secondary consideration. Until the water is brought to and carried through the village in pipes, it cannot be fit for drinking purposes. Many of the native huts are situated above the level of and close to the furrow, and here most of the washing takes place and the water further polluted.

(b) Sewerage and Drainage.—There is no system of sewerage or drainage carried out.

(c) Disposal of Night-soil, Slop-water and Household and other Refuse.—The bucket system is now in vogue and is carried out by a contractor. The night-soil is carried away once a week beyond the limits of the village. Most of the houses have closets attached to them. The formation of cesspools has been prohibited and the use of existing ones discouraged. The slop-water is not dealt with and is generally thrown into the back yards. The disposal of household refuse is also unsatisfactory, it being left to each householder to make his own arrangements. It would be better if the Municipality dealt with this in the same way as the night-soil, and have it carted away beyond the limits of the village.

(d) There are many overcrowded dwellings, especially in the native quarter, and many unfit for human habitation.

(e) The Management of Slaughter-houses, Bakeries, etc.—The slaughter-house is beyond the limits of the village, and is kept in good order. The butcheries and bakeries are also clean and well kept. There are no dairies in the town, but many people keep cows and sell milk. Some of the milk which is sold looks as if a large percentage of water was added to it. In some cases the kraals are too near the dwelling-houses, and their sanitary state leaves much to be desired.

(g) The Keeping of Cattle, Swine and other Animals.—The manner in which these animals are kept is disgraceful. The kraals are seldom cleaned, and they are far too near the dwelling-houses. In summer the stench is unbearable.

(h) The Order, Cleanliness, and General Sanitation of any Native Location or Camp of Natives.—There is no Native Location, the natives being scattered over the village, the largest number being above and close to the water-furrow. They ought to be removed to the other side of the village. The camp is as filthy as it can be. Some of the huts are not fit for swine. It is scarcely possible to walk through the camp at night time. The water-closets consist of a few boxes nailed together and covered with bags.

(i) Cemeteries and Burial-grounds.—The burial-grounds are kept in good order. There is no reason to think they are a cause of ill-health.

(k) Abatement of Nuisances Generally.—Since the Municipality has been formed there is no apparent improvement in the sanitary state of the village. There is a Sanitary Inspector who is empowered to take action to stop any nuisances when complaints are lodged. As a rule in small villages people are averse to making complaints about their neighbours when a nuisance exists, and so the evil continues. No complaint is lodged, no inspector visits the place, and no steps are taken to stop the

nuisance. Nothing has been done in the way of improving the drinking water. The condition of the streets is disgraceful in the extreme. As a rule they are full of holes, large stones, bricks, tins and refuse of all description. When it rains the water from the streets runs into the drinking water. A number of street lamps fully equipped have been presented to the Municipality by public subscription, but they are never lighted, the Municipality refusing to supply the oil.

All kinds of refuse are deposited on the sides of the main roads leading to Zeekoegat and Laingsburg and within the Municipal limits. It ought to be removed much further away. It is an eyesore to every traveller along these roads.

(l) There is no hospital accommodation in the district for the isolation and treatment of cases of infectious disease.

(m) The Presence or Spread of Infectious Disease.—There are a great many cases of Phthisis amongst the coloured people, amongst whom it would appear to be on the increase. There were no cases of Small-pox during the year. There was an outbreak of Diphtheria at the farm Vogelfontein, near Fraserburg Road. There were altogether eight cases, two of which were fatal. All the cases treated with Antitoxin recovered. The two fatal cases were not attended by any medical man. There were three cases of Enteric Fever near Prince Albert Road at the beginning of the year, and there was one case at a farm near the village.

There were three cases of Enteric in the village during the year.

All the cases of infectious disease occurred during the first half of the year. I am unable to state the cause of these outbreaks, but most probably they were due to bad water, the past year being exceptionally dry and water very scarce.

Vaccination was performed in the district and in the village during the year.

(ii) SUB-DISTRICT OF LAINGSBURG.

DR. H. W. STEPHENS, ADDITIONAL DISTRICT SURGEON.

During the past year the health of this village and of the surrounding country places has been good in spite of many adverse circumstances, such as the drought, which acted directly, by means of the scarcity of fresh milk, meat and vegetables, and indirectly by causing people to consume much more tinned foods than usual and to use frozen meat, which in many instances is too quickly thawed and kept too long after thawing before cooking, and by raising the price of all foods. Of other adverse circumstances I would draw attention to the neglect of the sanitary state of this village, owing to there not having been, nor being now any authority to enforce cleaning of yards and streets and the proper removal of excreta and kitchen refuse; this matter has been more than once brought to the attention of the Colonial Government, but even now that a Board has been elected, the members are powerless to do anything, their appointment not having been confirmed. In this perhaps the drought has been more of a friend than an enemy, as had we had heavy rains a great amount of decomposing organic matter would have been washed from the surface into the sluits, and would have soaked through the ground to the shallow wells which supply the bulk of the drinking-water here.

The last heavy rain we had here was in May, 1899, and was followed by an outbreak of Enteric Fever within three weeks, whilst so far as I could learn no one had been known to suffer from Enteric in the village during the preceding three years. Each summer since, the number of cases has diminished, till last season there was only one, and so far this summer there has also only been one case.

At that time the watershed of the village was occupied by the Coloured Location, and even now the highest part is rendered filthy, and probably contaminated with all sorts of infections by the coloured graveyard and the coloured inhabitants of the houses and rooms round the Mission Station, who are not provided with the necessary sanitary appliances; some have closets with buckets, but other closets I have seen there, had no buckets, and all were dirty, while the number of closets is insufficient. Further, at the north end of the village there are several European families living with no sanitary convenience at all, the banks of the sluit which brings water to the streets and water erven of the village, apparently being their favourite depositing ground for night-soil and other filth. Once before this sluit was the means of infecting many people—chiefly children—with Enteric, as a house near its upper part where Enteric had occurred, was washed down by a rather heavy rain and the surrounding filth was washed into the sluit, which runs past the public school; in the hot weather, as no other drinking-water is provided at the school, the children drink of this. There were ten children laid up with Enteric Fever, and about five adults who were in the habit of drawing their drinking-water from this sluit. This will serve to show the danger to which the people of a village like this are exposed if the strictest supervision is not exercised over the sanitary conditions. In this village at the present time and for many months past I assert that there has been no sanitary supervision at all.

(a) The water of the village is obtained from:—

- (1) Shallow wells, likely to be contaminated by all sorts of filth and infection, the water of which is to begin with very hard, some containing high percentage of salines; one sample contained 35 grains per gallon of chlorides.
- (2) River water, from the sluit above referred to. This water is better for all purposes than the well water, but open to grave objection on the score of liability to infection.
- (3) Rain-water Tanks.—This is undoubtedly the purest water obtainable, free from both organic and inorganic pollution, if reasonable care is taken to clean the tanks thoroughly; and the roof and gutters be cleaned from birds' deposits before rain.

With regard to obtaining a supply of water for the village which shall be free from risk of pollution at source and during conveyance, I have recommended a scheme in more than one previous report, but no scheme is possible so long as there is no responsible body with power to borrow money to carry it out.

(b) Sewerage and drainage are only required as far as the carrying off of storm-water is concerned.

(c) The collection of night-soil is carried out in a most inefficient and disgusting fashion by an ordinary wagon with two large wooden casks, which are never touched with tar or disinfecting agents, and which are not covered, and the smell which this contrivance disseminates through the night air of the village can better be imagined than described. Suffice it to say that it has on more than one occasion caused symptoms of severe biliousness and diarrhoea in persons who have been unfortunate enough to be near it when, bumping along, it shakes out the contents of the barrels on to the unmade, uneven streets of the village.

There is no arrangement for the removal of slop-water. Household and other refuse *may* be removed by the owner of the above contrivance or by the householder himself if he thinks fit to do so.

(*d*) Every hut in the Coloured Location and nearly all the rooms in the vicinity of the Mission Station come under the heading, "Overcrowded and Unfit for Human Habitation."

(*e*) There is nothing much to object to in the management of slaughter-houses, etc., except the complete absence of any authority to control them, should it be necessary.

(*f*) and (*g*) may be answered similarly to (*e*).

(*h*) The Native Location and houses of coloured people round the Mission Station are filthy and apparently under no control at all.

(*k*) No attempt has been made during the past year.

(*l*) None.

(*m*) One case of Enteric Fever occurred, the infection being contracted from the drinking-water of a farm already infected.

Diphtheria.—There have been a few isolated cases, but no real epidemic. This disease is more or less endemic to the Karroo now, so many farm-houses being infected by it, and it breaks out from time to time when the conditions are favourable to the dissemination of the virus.

Small-pox.—No cases have occurred.

Vaccination.—I have only vaccinated thirty-six people during the last year, but as far as I could ascertain they were all more or less successful, some taking in all four insertions, some in less. My experience of the lymph supplied to me from the Health Officer is that it is very good, and with careful insertion one can depend on the result.

Deaths.—I certified sixty-two deaths last year from the following causes:—

Diarrhœa	10
Pneumonia and Bronchitis	15
Enteric Fever	1
Phthisis	6
Fœtal Rickets	1
Cerebral Hæmorrhage	1
Serous Effusion in Cavities compressing Brain ...	1
Puerperal Septicaemia	1
Puerperal Convulsions	1
Diphtheria	2
Pertussis	9
Carcinoma Cervicis Uteri	1
Marasmus	2
Convulsions accompanying Teething	3
Acute Tetanus	1
Rheumatism and General Neglect	1
Peripheral Alcoholic Neuritis	1
Extensive Burn	1
Premature Birth	1
Facial Erysipelas	1
Vomiting and Exhaustion due to Teething	2
Total	62

The majority of these are from Diarrhœa and Lung Diseases, which are to a very great extent preventible, Diarrhœa by supplying pure water and guarding against chills, Pneumonia and Bronchitis by keeping down the dust by means of vegetation, belts of trees, etc., which also help to make the temperature more equable, while the safeguards against Phthisis appear to be the supply of pure milk to children, and improved hygienic surroundings generally for both children and adults. I can only close this report with the same remark as the one appended to my report of 1902,

namely, that the climate here is very healthy, and all that is wanted to improve the health of the place is good water, cleanliness, and protection from wind and dust, all of which can be obtained by the outlay of a certain amount of money and the expenditure of a little energy.

60. QUEENSTOWN.

(i) QUEENSTOWN.

DR. J. VICTOR HARTLY, ACTING DISTRICT SURGEON.

(a) Water-supplies, condition, sufficiency, causes likely to lead to pollution either at source, or during transit. Steps taken to bring about improvement.

The supply is fully described in last year's report. The unfortunate continuance of drought necessitated the Municipality issuing very stringent regulations curtailing the hours of supply, and preventing unnecessary waste of water. This is now happily ended owing to the rainfall early in 1904.

A Bill will be presented to Parliament during the Session 1904 asking for the necessary powers, etc., to proceed with the making of the Bongolo reservoir as quickly as possible.

(b) Sewerage and Drainage.—Nil.

(c) Disposal of Nightsoil, Slop-water, Household and other Refuse.—As reported last year, the latter requires much attention to make it satisfactory.

(e) Management of Slaughter-houses, Butcheries, etc.—These are satisfactorily kept, and considerable improvement made in dealing with the refuse from the slaughter-houses.

(f) Sale, Storage and Preparation of Human Food.—This is satisfactory, no complaints having been received. Frozen foodstuffs have been sold during the past year.

(g) Keeping of Cattle, Swine and other Animals.—There is no reasonable grounds for complaint, the Sanitary Inspector keeping a very strict control.

(h) The Native Locations of Queenstown and Lesseyton are very satisfactorily kept and ordered, the former under the Municipality with a Location Superintendent, while Lesseyton has a Village Board of Management.

(i) Cemeteries and Burying-places.—During the year a Burial Board has been formed by representatives of the various religious denominations together with the Civil Commissioner and the Mayor, to exercise full control over the cemeteries. This will be of great advantage to the town.

(k) Abatement of Nuisances Generally.—There is very little trouble in this respect, but there is a great want of properly regulated public wash-houses.

(l) Hospital Accommodation for Infectious Disease.

Small-pox.—The lazaretto, under the control of the Municipality, is sufficiently commodious for its purpose.

Typhoid.—The Frontier Hospital, under a special Board of Management.

A great want is felt for an infectious diseases hospital in the town.

(m) Presence or Spread of Infectious Diseases, especially Small-pox, Typhoid, Diphtheria.—Queenstown was remarkably free from these diseases in 1903.

The following comparative table will clearly show the steady decrease of infectious disease:—

	1901.	1902.	1903.
Small-pox	4	110	1
Diphtheria	5	0	1
Typhoid Fever	104	43	20
Scarlet Fever	65	9	2
	<hr/> 178	<hr/> 162	<hr/> 24

The water-supply is generally found to be the source of our Typhoid cases.

One case of Small-pox occurred in a native male, and was treated by the Municipal Health Officer in the Lazaretto. He recovered.

A very troublesome epidemic of Measles arose in the Native Location during October and September. The mortality was very high, occurring chiefly from Pulmonary complications.

Plague appeared in the Native Location in June, 1902. There were nine cases, eight of the pneumonic type all fatal, and one of the bubonic type recovered.

The thorough manner in which the destruction of rats and other precautionary measures have been carried out is very reassuring.

(ii) SUB-DISTRICT OF STERKSTROOM.

DR. J. B. CUMMING, ADDITIONAL DISTRICT SURGEON.

(a) The water-supply is derived from an open furrow as before, supplemented by some wells and water tanks.

(b) As before.

(c) Night-soil and household refuse are carted away once a week. Slop-water as before.

(d) Huts at locations and hovels in back yards are frequently overcrowded, and some are certainly not fit for human habitation.

(e) and (f) Satisfactory.

(g) Unsatisfactory, as before.

(h) Not very satisfactory.

(i) Satisfactory.

(k) As before.

(l) There are two rooms having a cubic capacity of about 1,000 and 2,000 feet respectively, about twenty yards apart, situated on the commonage about 500 yards from the nearest house in the village. These belong to the Municipality and are used for the isolation of cases of Small-pox.

(m) Only one case of Small-pox occurred during the year.

I know of no cases of Diphtheria.

There were thirty-two cases of Typhoid Fever reported. Probably there were more, which did not come under the observation of medical men.

There were thirty-one cases of Scarlet Fever.

(iii) SUB-DISTRICT OF WHITTLESEA

DR. JOHN K. MURRAY, ADDITIONAL DISTRICT SURGEON.

Notwithstanding the prolonged drought there has been no serious epidemic in this part of the division. Indeed the diminution in the amount

of Typhoid noted last year has continued. Pneumonia, although not epidemic, has been prevalent. In adults, some cases have been of a severe type, and not concurrent with Influenza. There has been less Influenza this spring than usual. Whooping Cough has been prevalent during the winter and spring months, especially among natives. Some cases developed Broncho Pneumonia. There were fifteen cases of Scarlet Fever, all in children. Some cases exhibited white sore throats, but on examination no Löffler's bacilli were found. There were three cases of Diphtheria during the year. Dysentery was prevalent during the last month of drought, and even after the rain had fallen. In many instances drinking-water was scarce, and its quality bad. Most of the cases were not of a severe type, yielding readily to treatment. No vaccination has been performed by me in the village or district. I am not aware that any public vaccination has been done around. There are certain areas in Whittlesea, Hackney, and Kamastone where the Public Health Act in that respect is a dead letter. Apparently the care which is bestowed on blacks and whites in Queenstown to prevent Small-pox is unnecessary in the smaller urban areas and in the country.

(a) The water-supply of this village during the last six months of drought has been a matter of grave concern. A scheme is at present before the Village Board to increase the existing reservoir's storage capacity, and a survey has been made. Meanwhile the overflow is allowed to come down from the reservoir into the Ox Kraal, turning a large tract of ground into marsh and sluit. As no covered pipes will be used, it does not seem feasible to use the reservoir for drinking-water on this scheme. No provision for drinking-water has been made. This is a desideratum. A bore-hole in the Market-square, furnished with a hand-pump and a windmill, would have afforded water to the poorer section of the community at no great outlay. That such a plan is practicable, is shewn by the fact that during the drought two ratepayers have re-opened old wells, and obtained a fairly strong flow of water. Strange to say no assistance can be got from Government bores to help a village community. Some farmers, whose personal estate is equal to the entire divisional valuation of this village, obtain a Government bore at the low Government rates.

(b) The defects in existence have not been so prominent owing to the dry weather.

(c) No change in this respect.

(d) No inspection has been made, but no flagrant cases have come under my notice.

The native quarters at the Police Camp require better ventilation. Otherwise the new barracks are very satisfactorily kept.

(e) and (f) A series of rules has been in existence for some years under the control of the Village Board, but there is no slaughter-house in existence.

The sale of milk is carried on by private individuals, but there are no dairies regularly supervised by the Local Authority.

(g) Swine no longer are allowed to be kept in the village, which is an improvement.

Kraals exist as heretofore, but no great inconvenience is caused thereby.

(h) The Native Location requires regular inspection. It harbours odd strangers, who are undesirable from a hygienic point of view, and also for some other reasons. In the drought the nearest water-supply was the village furrow. After this was empty the Ox Kraal, remote as it is, was the natives' nearest drinking-water.

Whittlesea.—Estimated population: White, 103; black, 75; total, 178. Births, 11. Total deaths, 3; deaths under 1 year, 1; deaths over 1 year, 2.

Mission Station, Shiloh.—Estimated population: Mixed, 243; Kafirs, 636; total, 879. Births, 35. Total deaths, 22; deaths under 1 year, 11; deaths over 1 year, 11.

Mission Station, Engotini.—Estimated population: 306. Births, 9. Total deaths, 18; deaths under 1 year, 3; deaths over 1 year, 15.

There has been little or no Zymotic Disease in these stations during the year of any serious nature.

Shiloh and Engotini are kept in good order, and the sanitation for Native Stations is good. The water-supply of Shiloh is derived from the Klipplaats, a river which always flows even in drought.

In the Ox Kraal Location during the year there has been no serious epidemic.

A considerable number of cases of Measles occurred during the earlier part of the year. The death-rate was small, so far as is known to me.

(i) The Whittlesea cemetery is kept in good order, and is a credit to the trustees.

(k) The conduct of the occupiers (chiefly coloured) of erven near the river bank requires supervision.

(l) There is no accommodation for isolation of infectious disease in the village or neighbourhood.

(m) There has been no Small-pox in the village or vicinity during the year, and no vaccination has been performed, as already stated. Small-pox will return, no doubt, judging by past experience. Nothing but systematic vaccination on a regular standard by medical men will furnish an adequate protection. The machinery in the Public Health Act is there to attain this result, but the various authorities do not carry out the provisions of the Act.

There has been one case of Typhoid in the village, and two cases of Diphtheria. There has been no Scurvy. One case of Cerebro-spinal Meningitis occurred in a Native on a farm.

There has been no Bubonic Plague. No infected rats have been discovered, but, so far as observed, no special search has been made for them.

61. RICHMOND.

DR. DAVID TRAILL, DISTRICT SURGEON.

(a) During the past year the rainfall at Richmond gaol has been 5.13 inches; the average for the two previous years being 17.67 inches. This means that the year 1903 has been one of drought, though not so severe as in many other districts of the Colony. As a result, the water-supply of the lower end of the town, which is derived mainly from a dam, was practically dried up for a long time before the end of the year, with the result that the gardens in that quarter were not watered. Thus no vegetables could be grown. Added to the drought we had a late severe frost, which killed nearly all the fruit. Owing to the drought, the local supply of butcher's meat failed, and tinned meats, cold storage meats, etc., had to be resorted to. The price of these articles, too, placed them beyond reach of many. Probably it was due to these circumstances, that I saw here this year, for the first time, a few cases of Scurvy among the coloured population.

(b) Sewerage and Drainage.—None.

(c) Night-soil, Slop-water, and Refuse Removal.—My remarks in last year's report still apply to these, with this exception, that the night-soil pails are now emptied with greater regularity; for some time I have heard no complaints in this respect. The other points on which I dwelt last year are still unchanged.

(1) The returned empty pail is not disinfected or tarred inside. It still smells badly even when supposed to be clean. (2) The dumping ground is still in the old place; within a few hundred yards of the nearest houses. It is now time that these two nuisances should be stopped; no doubt the question of expense here, as in so many other instances, stands in the way of the abatement of nuisances.

(d) Same as last year.

(e) Same as last year. It would be a distinct improvement if a public slaughter-house were erected outside the town. In many smaller towns slaughter-houses are not allowed within the town.

(f) Prosecutions occasionally occur under the Food and Drugs Act at the instance of the Police.

Nothing is done by the Municipality in the way of protecting the public against the use of foods unfit for human consumption. There is no Sanitary Inspector here. The inspection of fresh meat, fish and fruit was, owing to the special circumstances, this year more necessary than is usually the case. I have heard complaints, especially during the summer, about the frozen meat,, and the fish imported and sold here.

(g) Same as last year.

(h) Most of the huts in the location are unfit for human habitation; some are even without roofs. The Municipality exact a tax of 2s. 6d. per hut per month, irrespective of size of hut or number of occupants. Overcrowding is thus encouraged.

(i) Same as last year.

(k) In view of the year's drought, following on the epidemic of Diphtheria during the previous summer, I expected that, with the advent of the weather, we would get a recrudescence of this disease.

Probably the attempt by the Municipality to ward it off has had something to do with this result.

Since last epidemic, the large extent of waste ground, indeed one huge ash and rubbish heap, situated at the back of Paul-street, which in my last year's report I mentioned as the likely cause of the last outbreak, has been cleared away. More attention, too, has been paid to the general scavenging of the town; the furrows have been occasionally thoroughly cleaned out, with the result that in the hot summer evenings, the smells from them have been less pronounced than formerly. Attention also has been directed to the river bed; it has been periodically flushed; and the occasional thunder-showers during the summer months have also helped to clean it. It would be a further improvement if the Municipality would prohibit all washing of clothes in the river above the town bridge.

Upon the whole then, as regards the abatement of nuisances generally, I may report that during the past year some progress has been made in improving the sanitary condition of the town, though much remains to be done. I may here summarise some of the directions in which further improvement should be carried on.

- (1) Drinking-water in pipes through the town.
- (2) Proper disinfection after emptying of night-soil pails.
- (3) More remote site for depositing night-soil.
- (4) Slop-water removal under Municipal control.
- (5) Prohibition of washing in river, except at certain sites.

- (6) Slaughter-houses, outside town, and under Municipal control.
 - (7) Appointment of Sanitary Inspector.
 - (8) Appointment of Medical Officer of Health.
 - (9) Prevention of overcrowding.
 - (10) Condemning huts and houses unfit for human habitation ; and
lastly
 - (11) Hospital accommodation.
- (l) The erection of an isolation hospital for infectious diseases is greatly needed. I specially dwelt on the need of this in last year's report.
- (m) Birth-rate.—Last year the number of births registered was 166 (43 whites and 123 coloured). In 1902 the number was 172 (48 whites and 124 coloured).

Death-rate.—During 1903 the number of deaths was 159 (43 whites and 123 coloured.) In 1902 the number was 160 (33 whites and 127 coloured). Thus during the past two years there have been among the coloured population 247 births and 250 deaths; and among the white population 91 births and 76 deaths. Thus, while among the whites the births exceeded the deaths by 15, the coloured deaths exceed the births by 3 in two years. Does this mean that the mixed coloured population of the Colony is beginning to die out?

Causes of Death.—In my reports for 1901 and 1902, I have drawn attention to the enormous difference of the death-rate among coloured and whites from diseases of the Respiratory System. The same difference is still noticeable during 1903.

	Total Deaths.	White.	Coloured.
Phthisis Pulmonalis	19	1	18
Bronchitis	12	1	11
Pneumonia	9	1	8
Total... ..	40	3	37

Or for the three past years the numbers are:

	White.	Coloured.	Total.
Phthisis Pulmonalis	4	45	49
Bronchitis	2	52	54
Pneumonia	4	41	45
Whooping Cough	1	19	20
Influenza	0	13	13
Total... ..	11	170	181

The coloured population exceeds but is not double that of the white. We thus see that in Richmond District the death-rate from diseases of the Respiratory System is ten times greater among the coloured than among the white.

In view of this fact an effort ought to be made to improve the class of house occupied by the coloured population. The Municipality ought to build in the location a number of model houses, and let them at a rent just sufficient to cover interest of outlay. They should also grant a site in the location to anyone willing to erect on it a house to the satisfaction of the Municipality, a merely nominal charge to be made in the way of rent, say 1s. per month. The Municipality would in this way encourage the erection of a better class of houses in the location, and would also encourage the large coloured population, at present mixed up with the white population in the town proper, to migrate to the location.

Epidemics.—The year 1903 was a year of epidemics here. In it we had epidemics of Diphtheria, Scarlet Fever, Mumps, and Summer Diarrhœa, and a few cases of suspected Small-pox.

(I) Diphtheria.—The epidemic began in the end of 1902, and was at its worst in the early months of 1903. In my last report I dealt fully with the probable causes of its origin, continuance, etc. In evidence of its severity, I may state, that during 1903 there were registered 31 deaths (7 white and 24 coloured), as due to Diphtheria. Besides these there were registered 8 (5 white and 3 coloured), as due to Croup or Membranous Croup, and one coloured, as due to Tonsillitis. In my last report I mentioned, as a peculiarity of the epidemic, the frequency with which the nose was specially involved. I have now to add that in at least four cases, the immediate cause of death was bleeding from the nose.

In the case of the coloured patients the houses were put in quarantine; one guard (coloured) was set on duty night and day; the Municipality supplied rations, etc.

There were 77 notifications of Diphtheria in 1903 (23 white and 54 coloured). The large percentage of deaths to notifications, about 30 per cent. in whites and 45 per cent. in coloured, is mainly due to the later stage of the epidemic when the country district became infected. The country cases were often too late in being seen; and even sometimes, especially in coloured cases, the first notification received of the disease was the registration of the death. Thus some cases are included among the deaths and not among the notifications.

Section 28 of the Public Health Act of 1897 is a dead letter in this district. No parent even thinks of reporting to the Local Authority the presence of a case of infectious disease in his or her house.

Following Diphtheria, there was an epidemic of (II) Scarlet Fever. Twenty-nine cases were reported; no deaths occurred. The worst cases took on a Diphtheritic appearance, too, and in some cases there undoubtedly was a mixed infection. This is the second occasion on which I have seen an epidemic of Scarlet Fever following on an epidemic of Diphtheria; and I have thus been led to wonder if there can be any relationship between the two diseases. In the worst cases of Scarlet Fever which clinically resembled Diphtheria, I used anti-toxine with good results. As in Diphtheria, here also the disease in most cases spread to the nose. Though there were no deaths from Scarlet Fever, its after-effects were more serious than those of Diphtheria. The inflammation spread, as I have said, from the throat to the nose; thence in many cases along the Eustachian tube to the middle ear with resulting running ears for months after. In two cases the disease went further, the Mastoid Process becoming involved.

In the "British Medical Journal" of 15th June, 1903, there is a short notice of an article, by Dr. Duncan Forbes, in the "Journal of Pathology and Bacteriology," giving the results of the bacteriological examination of forty cases of post scarlatinal ear discharges; thirty-two of these contained diphtheria bacilli on culture; the diphtheria bacilli sometimes being in almost pure culture. Yet during that epidemic of Scarlet Fever only 1.4 per cent. showed clinical signs of Diphtheria. As a result of my own clinical experience I have come to the conclusion that in an epidemic of Scarlet Fever, especially if following on one of Diphtheria, it would be good practice to inoculate at the start every case of Scarlet Fever with anti-diphtheritic serum.

(III) Mumps.—During 1903 there was rather a serious epidemic of Mumps, affecting young and old alike. Many adult cases were very ill

with fever and delirium for days. There were a number of cases complicated with orchites.

(IV) Summer Diarrhœa.—Every year about the beginning of the warmer weather in November there is an outbreak here of Summer Diarrhœa. In nature it is somewhat like Dysentery, though the Military Doctors, who saw a good deal of it during the war, state that it is not real Dysentery as they get it in India, and that the treatment of it has to be different. The cause of this yearly epidemic seems obscure. Many people here call it the Apricot Sickness, because it comes at the beginning of the fruit season; but this year there were no apricots, and the epidemic was more severe than usual.

This year many people blamed the frozen meat, but it was also specially severe among the people on the farms who had eaten no frozen meat. It does not seem to be due to the water, for using only boiled water and boiled milk is no preventive.

Personally I favour the idea that in some cases at least it may be due to chills, brought on by the great range of temperature in one day that often occurs here at the beginning of summer, when we have a blazing hot sunny day followed by frost at night; or it may be that it is air borne like Influenza.

This summer the epidemic lasted longer than usual; in fact right up to the New Year; then there was a lull; but again about the beginning of February there was another wave of it. This return at the end of the summer is unusual.

(V.) Suspected Cases of Small-pox.—At the beginning of the year 1903 the Local Authority here had to deal with a number of suspected cases of Small-pox, but I dealt fully with this matter in my last report.

On 22nd April, 1903, I visited Roelofsfontein, where there were two suspected cases of Small-pox. The expenses of the Divisional Council in dealing with the matter amounted to £25 18s., four-fifths of which sum they are still claiming as a refund from Government.

62. RIVERSDALE.

DR. J. W. DE VOS, DISTRICT SURGEON.

(a) Our water-supply has been very regular during the year. No pollution takes place at its source or during transit, and it is pure except for a certain amount of vegetable matter which is harmless.

(b) Sewerage and drainage systems are not in proper order. In many streets there are no drains, consequently the water soaks into the soil or simply evaporates, leaving the surface soil saturated with organic matter. Then again, where drains exist they are often irregular, having cul-de-sacs in which the sediment lodges and stagnates, neither are the drains properly flushed.

To this condition of the drains I attribute the epidemic of sore throat in our midst, in several cases Diphtheria being diagnosed.

(c) As regards night-soil, slop-water and refuse, I have no deprecatory remarks to make, these being regularly and efficiently removed to proper sites. Two sanitary inspectors pay regular visits to the premises of ratepayers, and consequently backyards, stables and byres are kept clean.

(d) Our Municipal Authorities are not strict enough in enforcing the bye-law about overcrowded dwellings. After a large influx of coloured people from the farms into the town, the housing accommodation proved

inadequate, and buildings could not be erected quickly enough. Consequently overcrowding and herding together took place amongst the coloured inhabitants. In my opinion this is one of the causes of the prevalence of Tubercle amongst the coloured people.

We have many dwellings with faulty ventilation, still there are none unfit for human habitation.

(e) Slaughter-houses, bakeries and butcheries are regularly visited by sanitary inspectors, and are kept in good order.

(f) and (g) No remarks.

(h) There is no Kafir location.

(i) Cemeteries and burial-grounds are in good order.

(k) No cause for complaint over nuisances generally.

(l) No hospital exists for such diseases.

(m) Only a few isolated cases of Enteric occurred during the year. Diphtheria was more prevalent, but never in epidemic form. These cases were a continuation from the year before when Diphtheria was very rife, and was attributed to the climatic conditions then prevalent.

63. ROBERTSON.

DR. LEWIS WM. STEVENSON, DISTRICT SURGEON.

The Public Health duties performed by me during the year were vaccination tours through the district and any ordinary work as District Surgeon.

Sanitary affairs have undergone no marked improvement during the year.

(a) I entered fully into the water-supply of this town and that of Lady Grey in my last annual report, and as I have nothing further to add thereto, I beg to refer to that report.

(b) There is no system of sewerage or drainage. A properly constructed system of sewerage is owing to the increase of the urban area becoming an absolute necessity, and will of necessity require the attention of the governing Boards of Robertson and of Lady Grey in the near future.

(c) I refer you to my report of last year where this subject was fully dealt with.

(d) There is, with the exception of one or two coloured families, no case of overcrowding, but there are several dwellings, more especially those occupied by coloured people, which are barely fit for human habitation.

(e) Slaughter-houses and bakeries are, to the best of my knowledge, kept clean, and where such is not satisfactory the Local Authorities have the offenders prosecuted.

(g) Cows are kept in kraals during the night and driven to the Town Commonage during the day. There are few pigs in the town.

A Sanitary Inspector is appointed by the Council to attend to all nuisances. He has brought one or two to my notice, and one sincerely hopes that endeavours will be made to decrease their number.

(h) There are no Native Locations.

(i) See last year's report.

(k) I know of nothing being done to prevent the spread of disease.

(m) The general health of the district during the year has been very good. Measles and Whooping Cough prevailed, but not in a severe form.

An outbreak of Diphtheria occurred in Bushman's River with three deaths.

Typhoid was rather prevalent during the early part of the year. There were few deaths.

There have been no cases of Small-pox.

Estimated Population, 8,000.

Births.—Europeans, 164; Coloured, 214; Total, 378.

Deaths.—Over one year, Europeans, 57; Coloured, 74; under one year, Europeans, 17; Coloured, 42; Total, 190.

The following are some of the main causes of death:—

Diphtheria	3
Enteric Fever	2
Phthisis	17
Pneumonia	7
Bronehitis	26
Convulsions	17
Meningitis	4

64. SIMON'S TOWN.

DR. H. CLARKE, DISTRICT SURGEON.

During 1903 the public health of Simon's Town was good, and few cases of infectious diseases occurred.

(a) With regard to the water-supply, I have little to add to my statements made last year. On the whole it is satisfactory at present, but becoming inadequate. I believe the Naval Authorities contemplate constructing a large reservoir above the town, and if the Municipality can come to some joint arrangement the supply will be plentiful for years to come. About five miles of water pipes of various sizes have been laid within the Municipal boundary.

(b) Scavenging and Drainage.—Surface drains are in good order. The following pipes have been laid during the year:—Main Street, from Waterfall Road to outfall at Railway Station, new twelve-inch pipe, about 1,260 feet; Forest Hill, 1,080 feet of six-inch piping and 75 feet of nine-inch; Lower Kloof, 1,760 feet of nine-inch sewer piping; Deviation in Smith's Lane, 230 feet of nine-inch sewer piping.

(c) Night-soil, slop-water, and household and other refuse are collected daily by the Municipality. Night-soil is thrown into the sea and other refuse burnt. With the increase of drainage the number of sanitary pails has correspondingly diminished.

(d) Some overcrowding exists, but the officers of the Local Authority keep a sharp eye on low class tenements. Seeing how hopeless it is entirely to prevent overcrowding, I have suggested that the owners of such houses should be compelled to thoroughly ventilate them, and where drainage is available, to provide sanitary conveniences, and the Municipality has taken the necessary steps.

(e) Slaughtering is not now carried on to any extent, and the slaughter-houses are clean.

(f) The Sale, Storage, and Preparation of Human Food.—A large number of small shops have been opened lately which require watching. Steps have been taken to prevent the keeping of food by Coolies in sleeping places.

(g) Few cattle and swine are kept in the town.

(h) The Native Location is fairly clean, considering the habits of the dwellers. It is under the charge of a headman appointed and paid by the Municipality. I dwelt on this subject in my last report.

(i) Cemeteries and burial-grounds are clean and well kept.

(k) The Local Authority does all in its power to keep the place free from nuisances dangerous to health, and the sanitary improvements introduced of late years have had a marked effect for the better.

(l) No hospital accommodation exists. It is much to be regretted that Government did not proceed with the construction of the proposed Casualty Ward simultaneously with the New Gaol. A Casualty Ward is all that is required at Simon's Town, and it is quite beyond the means of the inhabitants to support a Cottage Hospital.

(m) A few cases of Measles occurred during the winter months, and during the year twenty cases of Typhoid and four of Small-pox were notified. Many of the cases of Enteric occurred at the Dock Extension Works and were due to faulty drainage and the dirty habits of some of the foreign workmen. Drainage there has now been improved, with the result there has been no case of fever for some months.

On May 6th a case of Small-pox (1) was seen by me at the Dock Extension Works, and on the same day a coloured boy (2) living at the opposite end of the town developed the disease. Steps were at once taken with the knowledge of the Municipal Council, to segregate and vaccinate all contacts, and on the following day the cases were removed to Rentzkie's Farm. On May 16th an infant sister (3) of the coloured boy was found suffering from the disease and she and her mother were at once also sent to the Small-pox Hospital. On June 14th a white man (4) was reported ill and sent away. A Malay child, aged about six years (5), living next door to the last mentioned case, was found convalescent from the disease and from her he had probably contracted it. This case, the Malay child, was probably concealed from the beginning of illness, although the mother strongly denied she knew it had Small-pox. It was impossible to trace the origin of the first cases, the man at the Extension Works had not been out of the town for three months, but the coloured boy had been to the Circus in Cape Town "about a fortnight" previously. Of the above cases one (No. 4) only had been vaccinated in infancy. His age was about sixty-five. I vaccinated at specially appointed centres and no further cases occurred, and there were no deaths.

The cost of the outbreak was £180. This amount would have been much less had the Municipality a steam disinfecter at its disposal for the purpose of disinfecting clothing, bedding, etc., instead of destroying by burning.

A large number of rats has been paid for by the Municipality at the rate of three pence each, and many have been killed by private persons without a reward being claimed. I do not think rats are now largely prevalent.

I may mention that the Local Municipality has appointed me as its Medical Officer of Health.

65. SOMERSET EAST.

(i) SOMERSET EAST.

DR. GEORGE A. LEGGE, DISTRICT SURGEON.

(a) Water-supply is as before reported.

(b) Sewerage and Drainage.—As before.

(c) There is nothing new to report in regard to the disposal of night-soil.

Slop-water, etc., are now removed daily by contract with Municipal Council.

- (d) and (e) As before.
 (f) A cold-storage has been instituted.
 (g) to (k) As before.
 (l) There is no hospital accommodation provided.
 (m) There has been no severe outbreak of infectious disease.

The following cases of infectious disease were reported:—

Enteric Fever	... ..	3
Diphtheria	... ..	3
Small-pox	... ..	3

(ii) SUB-DISTRICT OF PEARSTON.

DR. JNO. MCDUGALL, ADDITIONAL DISTRICT SURGEON.

(a) Water-supply.—For ordinary and domestic purposes generally the community have to rely exclusively on rain-water, which is collected in tanks, and which is necessarily variable, and in some cases on public wells, while for drainage, flushing, and irrigation on the river supply, which, owing to the prolonged drought incidental to the Colony, is uncertain, irregular, and frequently far from adequate to the needs of the populace.

In connection with the latter point, it may be well here to remark that a public meeting of the ratepayers was convened on last of December, at which certain resolutions were proposed and unanimously carried, viz., that this supply must be better regulated, its purity guaranteed, and the possibility of contamination from human and animal sources prevented, as also from decaying leaves and every other variety of vegetable decomposition. Hitherto the supply has been uncertain and precarious, and no efforts have been made to prevent pollution from the sources indicated—all manner of refuse, animal and vegetable, having been thrown into the drains.

(b) Sewerage and Drainage.—For the regulation of this no provision is made whatsoever; all kinds of discharges are thrown into the drains and left to flushing, which is done only occasionally—the draining off of which is left to these and to natural gravitation.

(c) Disposal of Night-soil, Slop-water, etc.—This is, as a rule, simply thrown into earth-closets, which are of small depth, and frequently also into public places. No provision whatsoever is made for its collection or disposal.

(d) Overcrowded Dwellings and Dwellings Unfit for Human Habitation.—Amongst the white population there is no such nuisance, but amongst the coloured this prevails to a large extent—the average number of inmates to each dwelling or habitation being unknown.

(e) The Management of Slaughter-houses, Butcheries, Bakeries, Dairies, and other Trades, etc.—All animals intended to be slaughtered are slaughtered at the owner's residence; but no regulations are enforced in this respect.

(f) The Sale, Storage, and Preparation of Human Food.—These are left entirely to the local store-keepers; but a cold storage establishment would be a public boon.

(g) The Keeping of Cattle, Swine, and other Animals.—These are generally confined in kraals adjoining the residences of their owners.

(*h*) The Condition of the Natives in regard to Order, Sanitation, etc.—This is unsatisfactory and demands immediate reformation; mention has already been made of this in the resolutions adopted at the public meeting convened.

(*i*) Cemeteries and Burial-grounds.—These are in very good order.

(*k*) The Abatement of Nuisances Generally.—A location and street keeper is urgently required, to look after these matters.

(*l*) Hospital Accommodation for the Isolation and Treatment of Infectious Disease.—None exists except at the local prison, which is quite inadequate for the purpose; and special provision should be made for the white patients, who ought not on any account to be housed heterogeneously with the coloured patients.

(*m*) The Presence or Spread of Infectious Disease, especially Enteric Fever, Diphtheria, and Small-pox.—The following cases of Infectious Disease have been reported:—

Enteric Fever	5
Scarlet Fever	9

None of the above cases of Enteric Fever occurred in the town of Pearston, but were reported from the country; no deaths occurred.

Small-pox, Bubonic Plague, and Epidemic Pneumonia have never appeared, but there has at frequent times been an epidemic of Epidemic Catarrh or Influenza, due to climatic and atmospheric variations.

One case of Dysentery occurred during the year.

66. STELLENBOSCH.

(*i*) STELLENBOSCH.

DR. J. H. NEETHLING, DISTRICT SURGEON.

The general health of town and district has been excellent.

In the town there has been no epidemic of any sort.

In the district, the epidemic of Small-pox, which commenced in August, 1902, was practically conquered before the beginning of 1903, by thorough vaccination.

(*a*) Water-supply.—Stellenbosch is one of the best watered districts of the Colony. The quality of the water is of the purest. It contains practically no lime salts, and to this fact may be attributed the bad teeth of the inhabitants.

The supply is ample for many years to come.

The right to the water is, however, a vexed and difficult question between the Municipality, as representing the inhabitants of the town, and the agriculturists both in the town and along the valley of the Eerste River.

The water-supply for drinking and household purposes is brought from the river in iron pipes or mains, and distributed to the several houses in lead pipes.

The intake from the river is about a mile to the east or above the town, or about half a mile above the Municipal area.

During the year, owing to the expansion of the town, several new streets have been supplied with water.

The pressure is sufficient to supply the second story of any house with water.

The regulations require that every self-contained house be fitted with at least one leading. In the case of rows of rooms let to the poor, every two such rooms are required to have a separate leading.

There is thus an ample supply of water which can be both good and pure. More care, however, should be taken that water be not wasted, for economical reasons, and for others to be specified later on.

As I have shown in former reports there is great danger of contamination of the supply. There are several farms and many labourers' cottages above the intake from the river. The drainage from all of these flows directly into the river. Moreover, the farm lands, orchards and vineyards are heavily manured, in many instances with manure from the town. Much of this manurial matter in solution is washed into the river, both by irrigation and filtration during the winter rains.

There is always a considerable amount of vegetable matter held in suspension in the water. Much of this is deposited both in the intake well and in the settling pond or reservoir, which is situated about 200 yards below the intake. It can easily be conceived how dangerous such deposited matter may become in case the water becomes contaminated with Typhoid or other injurious germs, higher up. I am pleased to be able to state that the Municipality have at last taken steps which place us within a measurable distance of a purer water-supply. Meanwhile proper steps to prevent contamination are not to my knowledge being taken. In case of an epidemic in the town no manure should be allowed to be taken to any farm. And in case of any such disease in the district, instant care should be taken that the streams which all flow to the river be not contaminated. This could be done by means of disinfectants, by proper burial of fæces, urine, etc., and by the burning of all refuse belonging to such affected house or farm. This should be done in any part of the district, but more especially and carefully above the water-supply to the town.

Both the Municipality and the Divisional Council should have a permanent inspector, the two to work in conjunction in the area of water-supply to the town.

There has never, to my satisfaction, been sufficient evidence to prove that the river-water was contaminated by Typhoid, and so causing the epidemics we have had in Stellenbosch. To support me in my opinion there is the fact that ever since the adoption of better sanitation there has been practically no case of Typhoid Fever in the town.

There is here such a large population of youth of both sexes, that should such a calamity occur, the result would be too serious to contemplate with calmness.

These young people come here to study from all parts of South Africa. The matter is therefore no local one, but it affects the interests of the whole country. I would, therefore, urge upon the authorities the necessity of placing the purity of our water above suspicion, and that without delay.

(b) Sewerage and Drainage.—There are three streams of water, all diverted from the river, above the town. These are used for irrigation purposes, and also serve as the main drains of a large portion of the town. The rights and privileges connected with these are shrouded in "Heemraden" antiquity.

The first of these, the most northerly, is taken from the river about a mile above the intake to the town water-supply. It flows over the farm Mostert Drift. Along the course of this stream on the above-mentioned farm, there are several cottages inhabited by coloured people. It then flows through a vlei, which is used mostly as a run for cattle in summer, then through a duck-pond, past a row of workmen's houses, past several new houses built on the Evergreen property, and so on through a large portion of the town into the Kromme River.

It may thus far then be considered as a sewer for all these dwellings.

The second is turned out of the mill stream (to be presently described), flows through the Evergreen property, and lower down through the backyards of many dwellings, also to empty itself in the Kromme River.

Lastly, there is the millstream, which is taken from the river just below the intake of the water-supply. This stream belongs to the owner of the mill in Mill-street. The Municipality have, however, bought from the present owner the right of the water for three months in the year. From this stream practically are supplied all the furrows along the streets. Many houses drain directly into the millstream, and all the rest of the old town into the furrows.

There is a large area of the township now being built upon, which cannot be served by this water, and, naturally, in hot weather the condition of matters is not over savoury.

The Municipal Authorities are carrying out the improvements in the street furrows as fast as they can. Already the improvement is very great. When all the streets have been supplied on either side with a properly built furrow, the dampness, so much complained of, will be cured, the waste water can be carried off quickly, and the furrows flushed and cleaned efficiently. Now that the backyards can be kept dry by the water flowing away easily, and that the dirt cannot collect among the cobbles with which the old furrows were lined, the diseases rife in the poorer quarters, such as Croup and Diphtheria, have become practically nil.

The work, however, is going on much too slowly. The main streams above-mentioned have not been touched. They are still dirty and rat infested. The areas mentioned in my last report, and upon which I specially reported on more than one occasion, have not been touched. Also, as far as I know, there is no scheme for proper drainage of the newer areas of the town. I here again would urge the need of despatch, knowledge, and care.

Lastly, there is the ever-present and difficult question of the washing in the backyards. This combined with leaky taps, ill-kept tanks, faulty drains, and carelessness in regulating the water-supply, serves to form in many instances a nuisance to more cleanly neighbours, and, what is worse, a great danger to the community in general.

A laundry has been started, and will soon be opened, so that there will be less washing done in the river, and there will be less excuse for the doing of large washings in small backyards.

To sum up:—Stellenbosch is so situated that it can be completely and safely drained by means of the above-mentioned streams, and the furrows in connection with them, provided that they be properly constructed, kept clean and flushed daily, and, above all, that the authorities enforce the proper construction and keeping of the connections between the backyards and these drains.

(c) The Collection and Disposal of Night-soil.—The double bucket system of night-soil removal was introduced and generally enforced some three years ago. With the exception of perhaps a dozen, all water-closets and cesspools have been closed up. Those that were allowed to remain were well-constructed, and on properties where, from position and drainage of soil, they could be neither a nuisance nor a danger to the community. Although there was a good deal of opposition at first, the inhabitants have accepted the change, and now acknowledge the improvement. There is a nightly service. This is done quietly and without its being an indecency or a nuisance. The main difficulty, and one which amounts to a grievance to the surrounding farms, is to find a place properly situated for the emptying and cleansing of the buckets.

This difficulty will, however, be soon remedied, as a spot has been fixed upon, sufficiently far from the main road and neighbouring farms to satisfy the public.

Slop-water.—All slop-water should be drained into the streams and furrows, as described under heading (b).

I am afraid, however, that too much of this dangerous compound is allowed to collect in pools, near the houses. Many yards are too low to admit of proper drainage. The authorities have not been careful enough to ensure the proper elevation of foundations of houses. This would allow the elevation of backyards and proper drainage.

Household and other Refuse.—These are removed by means of carts, and are then either used as manure or burned. The service is cleanly and efficient.

(d) Overcrowded Dwellings, etc.—There are no overcrowded dwellings in Stellenbosch, nor any unfit for human habitation. Any such, coming to the knowledge of the authorities, are at once removed. A much better class of house for renting to the poor is now insisted upon. This makes the houses in the town much more expensive. The cheaper sort of house is, in consequence, very scarce, and many labourers find great difficulty in getting suitable houses. The housing of the very poor will soon become a serious question.

Because of this there has been put up at the railway station, and other places bordering upon the Municipal area, a class of house of whose fitness I am not assured. Here again is the want shown of a Divisional Council Inspector.

There should also be a regular periodical inspection of Kuils River, Faure's Siding (or Eerste River Village), Lynedoch, and Raithby. At present, as far as I am aware, these places are fairly sanitary.

(e) Slaughter-houses, etc.—To the best of my knowledge the butcheries, bakeries and dairies, are regularly inspected by the Sanitary Inspector. I have never been instructed to inspect any of these, either in my capacity as District Surgeon, or Medical Officer of Health. This is a mistake. In my opinion regular medical visits of inspection should be paid. Several butcheries are in the hands of a class of people who require close watching, as far as cleanliness is concerned. I am more than suspicious in this matter.

The slaughtering is all done out of town.

There are no other trades which may effect the health of the community.

(f) The Sale, Storage, and Preparation of Human Food.—There are only a very few cases which would answer to the fruiterers, poulterers, and fishmongers' shops of large towns. Vegetables and fruit are brought in fresh from the farms, or gardens in the town. There is some business done in the way of selling fruit, such as oranges and bananas, by Indians. I am afraid that the storage of such delicacies is not of the most sanitary.

There are no cheap eating-houses that I know of in the town. Along the main roads, however, there are a few such. These should also be supervised by the Divisional Council Inspector.

There are many smaller shops where a considerable amount of trade in groceries is done. Some of these are in very insanitary areas of the town. A much closer inspection should be ensured.

(g) The Keeping of Cattle, Swine, and other Animals.—Many cows are kept in connection with dairies and for private use. I am not aware that any of these have been either a nuisance to neighbours, or that they are kept in such a way that they may be a source of danger to the public health.

The keeping of swine is under strict regulations. I am afraid, however, that in several instances these are evaded.

(h) There are no locations or camps of natives in this town or district.

(i) Cemeteries.—There is only one cemetery within the Municipal area. The town is extending dangerously near to this, and it would be advisable that it should be removed. Those belonging to the Episcopalian, Dutch Reformed, and Mohammedan communities are in very good localities, being situated so that any drainage from them cannot harm any of the inhabitants. I have sent in a special report to Government about grounds asked for by the Presbyterian and Jewish communities. Since then some ground has been applied for by an Independent Coloured community. This spot is further away from the farm Mon Rapos than those applied for by the Presbyterians and Jews.

On the whole the cemeteries are well placed and free from becoming a danger or a nuisance to any.

(k) The authorities have done their best in removing nuisances, as far as lie in their power. Canteens are strictly looked after.

If the streets were kept in better condition, and the alterations and improvements (mentioned in other portions of this report) completed there would be very few nuisances to complain of.

Several complaints have, however, been made to me that the Municipal Authorities will do nothing in such matters as the following: (a) the smoke from a bakery causing a nuisance to the neighbours; (b) the bad drainage of certain areas. In both cases, I do not think the authorities have done their duty.

(l) Hospitals.—There is one make-shift building erected of galvanised iron. It contains three rooms and a kitchen. It is absolutely useless as a general hospital, but served its purpose admirably as a lazaretto for the poorer classes in the late Small-pox epidemic.

There is a large costly hospital being erected. When completed, it is hoped, it will fill a long felt want. The former belongs to the Municipality. The latter is under a General Board of Management.

What, however, is much more urgently required than either of these is a building which should be erected in connection with and for the sole use of the scholastic community in case of an epidemic.

(m) Epidemics, etc.—I experience every year a great difficulty in getting from the authorities an account of the notifiable diseases which occurred during the year. I am, therefore, unable to state exactly how many cases of such nature have occurred during the past year. There has, however, been nothing approaching an epidemic. In my own practise these have been practically nil, with the exception of the few cases of Small-pox, which I will refer to immediately.

I sent in a complete account of the Small-pox epidemic which effected this town and district with the request that the report should be affixed to the Annual Health Report for 1902. It took in, however, more than the twelve months, finishing with the cases of the Europeans which occurred in March.

All particulars will be found in that report.

In general I may state my conclusions. I am of opinion that it is modified Small-pox, which will become virulent and fatal if allowed to spread from European to European. In this epidemic, vaccination has effected all its most ardent advocates could claim for it. In over sixty cases only two had been previously vaccinated, and these insufficiently.

In many cases vaccination modified the disease, even when the operation was done only three days before the eruption took place. The lighter the complexion the more violently the disease affected the patient.

I do not think that in a district community segregation is of any use. It would require an army of inspectors to keep the people from spreading the disease. I had, what was of much greater use, the authority of the farmers at my service, and yet many cases escaped notice, many were hidden, and many received visitors. It was notorious that, during Martial Law, notwithstanding the large number of mounted guards and the stringency of the regulations, the coloured people moved about freely from farm to farm during prohibited hours. Any segregation therefore to be effective would require a large number of inspectors and more severe punishment.

Recognising the futility of segregation, I set about complete vaccination of the town and district. In one way and another over 6,000 persons were vaccinated. The cure proved most successful, as the epidemic was stamped out within six months.

There was one other case that of a convict at Rustenburg in this district. It was discovered on the 1st August. The man was promptly segregated, the other convicts were immediately vaccinated, also the constables, and all the inhabitants of the farm and neighbourhood. There was thus no further spread of the disease.

(ii) SUB-DISTRICT OF SOMERSET WEST.

DR. WILLIAM HEWAT, ADDITIONAL DISTRICT SURGEON.

During the year 1903, on account of there being no Municipality at Somerset West, the sanitary condition of the place was very much neglected, but now that a Municipality has been definitely agreed upon, I expect things will much improve. The duties of street-cleaning and attending to water-furrows has been carried out by the hard labour prisoners as hitherto. No free labour has been employed.

(a) The conditions of the water-supply still remain the same. The water for drinking purposes is mostly got from the river. A water-supply brought down in pipes from the higher reaches of the river is badly wanted.

(b) Sewerage and drainage.—Nil.

(c) The collection and disposal of night-soil, etc., has been left in the hands of each separate individual, and, of course, is carried out in a very unsatisfactory manner.

(d) As far as is known there are no cases of overcrowding, and all dwelling-houses are kept in a fairly satisfactory condition.

(e) All slaughtering is carried on outside the village. Butcheries, bakeries, etc., are also satisfactory.

(g) The keeping of cattle, swine, etc., is in the hands of the owners themselves without any control from outside.

(h) There are no Native Locations.

(i) The cemeteries are situated on the outskirts of the village, and are in good order.

(k) The police do the best they can towards the abatement of nuisances.

(l) There is no hospital accommodation in the district.

(m) The district was very clear of infectious diseases throughout the year.

SOMERSET WEST STRAND.

The improvement in the sanitary condition of the Strand is still going on, but a lot still requires to be done to make things satisfactory.

(a) Most of the houses get their water-supply through pipes brought from far up the river, and the occupants of those houses have been fairly

healthy, but the occupants of the houses, especially close to the river, and getting their water direct from it, have suffered a good bit from Enteric Fever.

(b) A number of septic tanks are being put up in the Municipality, but what the result is going to be with non-absorbent soil, I am unable to say at present.

(c) The night-soil, etc., not removed as above, is regularly removed by cart, the tub system being in vogue.

(d) The increase in the number of houses in the limits of the Municipality has been very considerable, and great care will have to be exercised to pigsties, etc.

(e) There are no complaints regarding slaughter-houses, etc.

(f) The Municipal Regulations are being strictly enforced with regard to pigsties, etc.

(g) There are no Native Locations.

(h) Cemeteries have been removed to the outskirts of the Municipality.

(i) Nuisances are promptly dealt with.

(k) There have been very few cases of infectious disease throughout the year.

Gordon's Bay, with its splendid water-supply, is increasing in size, and the place is being kept in a good and sanitary condition under the vigilant care of the Village Management Board.

67. STEYNSBURG.

DR. ALEX. V. SHINE, DISTRICT SURGEON.

(a) The town receives its water-supply from four sources, viz.:—(1) Furrow-water; (2) Bore-holes and sunken wells on private property; (3) Municipal wells, of which there are three; (4) Rain-water.

The water of the upper portion of the town is the best obtainable here, and is pumped by a windmill from a bore-hole into five tanks which stand at the head of the Market-square. As far as I can ascertain none of the supplies are polluted.

(b) The surface drainage of the town, owing to our excellent streets, is all that can be desired.

Sewerage and drainage do not exist.

(c) Night-soil.—The tub system is universal, the Municipality having taken over the contract, and is excellently carried out.

The same applies to slop-water, and household, and other refuse; the Municipal carts calling at every house when necessary.

(d) I am not aware of any overcrowded, or dwellings unfit for human habitation.

(e) The slaughtering and cleaning of carcasses is done outside town; there are two butcheries which are kept in a cleanly condition. There are two bakeries which are also kept in proper order. There are no dairies or trades affecting health.

(f) Satisfactory.

(g) Milch cows and goats are kraaled in town at night for milking, being sent to the veld every morning. The Municipality does not allow swine to be kept in town.

(h) The Native Location is kept orderly and clean, and the general sanitation is good. The site, however, might be better. It is situated on the mountain slope, and when heavy rains occur the natives suffer a lot of discomfort from the water entering their miserable dwellings.

(i) There are three cemeteries—one European and two native. They are all in use, and kept in a proper manner.

(*k*) The abatement of nuisances is excellently attended to.

(*l*) With the exception of the gaol hospital, there is no hospital accommodation here of any sort. I consider a large and growing town like this should have proper hospital accommodation. When any infectious cases occur they have to be segregated in a tent, where, in a cold climate like this they cannot be properly treated.

(*m*) There have been a few cases of Enteric Fever of a light form principally amongst Europeans. I cannot say what was the cause of the outbreak. I have not heard of any deaths.

Diphtheria.—There have been several cases of this disease amongst Europeans and natives. The mortality has been heavy amongst the natives owing to their applying too late for treatment, and the careless manner in which they attend their sick.

Vaccination.—No public vaccination has been performed in this town or district for five years. I find that 920 births have been registered at the Resident Magistrate's Office here from the 1st of January, 1899, till the 15th of January, 1904. I consider I am quite correct in stating that not five per cent. of these have been vaccinated. During the three and a quarter years I have been in practice here, I have not, with the exception of the prisoners at the gaol, vaccinated five persons!

I believe that there are upwards of fifteen hundred persons, principally natives, of all ages in this district who have never been and never will be vaccinated as long as the law is not enforced, and that with a law which is infinitely superior to what is in force in England.

If we should be visited with a severe epidemic of Small-pox, the consequences are too horrible to contemplate.

Bubonic Plague.—Fortunately we have not been visited with this disease; no rats or rodents have been discovered here suffering from this complaint. As pointed out above there is absolutely no hospital accommodation here of any kind, with the exception of the gaol hospital, and to which no outside infectious case can be admitted.

I would again impress on the Government the urgent need there is for a suitable hospital for infectious cases to be erected as early as possible.

Scurvy, Epidemic Pneumonia, etc.—No cases.

68. STEYTLERVILLE.

DR. JNO. DON, DISTRICT SURGEON.

(*a*) to (*l*) See remarks in report for previous year.

(*m*) Infectious diseases have been very prevalent this last year, *e.g.*, Mumps, Whooping Cough, Scarlet Fever, and a case or two of Measles.

Enteric Fever was represented by one case, a European girl, the source of infection being Willowmore, from which town she had come on a visit and sickened a few days after her arrival. She was first noticed to be sick on January 25th, 1903, and was certified as well on March 28th, 1903. There were no other cases in the village.

Small-pox.—There were several outbreaks of Small-pox in the district during the year. First of all my partner and myself reported an outbreak each, one on Request, one on Klipgat, in the division of Willowmore, which cases were dealt with by the Divisional Council of Willowmore.

Then it broke out at Vaalpad's Kloof in this district, a coloured woman and child having sickened. These cases had been in contact with natives at Klipgat.

I had performed a vaccination tour in that direction on the 8th of August, and these two were amongst those vaccinated. The mother sickened on the 14th August and the child on the 17th August, and in both cases the vaccination was also successful, so that these cases were vaccinated subsequent to infection, taking the normal period as twelve days.

These cases were also treated by the Willowmore Divisional Council, and so I have no further knowledge of them except that there were no deaths.

On August 17th a suspicious case was reported at Pienaar's Poort, and on proceeding there I found a Kafir's hut infected. Two children were convalescent, and the father was in the suppurating stage. I vaccinated all the family (seven) and placed the portion of the farm adjacent under quarantine. Those cases proceeded favourably, no further outbreak took place, and they were released from quarantine on September 14th. This infection seemed to have come from Glen Connor, though it was very difficult to get any information out of the people.

Then on August 28th a suspicious sickness was reported at Wilgenrivier, but on my proceeding there I found there was no active disease, but all the inmates had had Small-pox within some recent period as they had all more or less marks apparently recent, so I only ordered disinfection.

When Small-pox was first reported at Request, the Magistrate here made arrangements for a complete vaccination of the district, which was carried out very successfully. In the village and district together 888 primary vaccinations and 1,876 re-vaccinations were performed. The results were not checked, but judging by reports the results were very successful in adult primary vaccinations and in a good many re-vaccinations—too successful, as a good many were confined to bed for from a few days to a week when development of the pock was at its height.

This crusade was very successful in checking the spread of the disease, as only one farm was infected from a local source and in that case infection had occurred before the commencement of the tours.

There has been no epidemic of other diseases than those mentioned. I may mention however that a month or two ago I came across a case that I believe to be Madura Foot. It happened in a coloured man who came to consult me, and on examining his foot which he had cut with an axe some considerable time previously, I found several long sinuses out of which black gunpowder-like granules could be scraped, and the patient said that at times these came away so freely as to block the opening of the sinus, and he had to pick them out to allow the exit of the matter. I only examined them roughly under the microscope, as I asked the man to return in a few days for treatment, which he unfortunately has not done up to the present. The microscope showed, however, it was a fungoid growth of some description, but as I expected another opportunity of going into it more fully, I did not examine it in any detail.

With regard to cost of the Small-pox, I can only give that incurred directly by Government in investigating reported cases and in vaccination. The sum was £52. These cases fell under the Divisional Council of Willowmore as soon as reported, so that they were responsible for the further expense incurred.

69. STOCKENSTROM.

DR. N. A. BUTTERFIELD, DISTRICT SURGEON.

The health of the district, on the whole, for the last twelve months has been excellent. There has been a Small-pox epidemic among Kafirs only, very mild, and at present entirely absent in the district, as far as I know.

Recently an outbreak of Diarrhœa occurred, resembling the so-called English Cholera, with occasionally a Dysenteric type; no cases proved fatal.

(a) Water-supply.—I have reported to the Municipal Authorities here that the present arrangement is not satisfactory, discussed the matter orally, and at the next meeting of the Board, to be held shortly, the following suggestion will be brought forward:—

“It is suggested to request the Cape Government to allow the supply for the Cape Police to be used for the town.”

Seymour is only a village practically, and expense is a very important matter. The present supply is brought miles away from the hills, and then runs by furrows through the town. This is mainly used to flush the gardens, but is used, also, mainly by the coloured population, partly for drinking, partly for washing purposes. This is evidently very risky. There is also a spruit close by used by the natives for the same purposes; the Native Location is on one side of the spruit, the town on the other. It is plain that contamination of either is very easy, though it does not seem to have done much harm up to now. It is impossible to prevent, practically, those who will from using this for above purposes, and the furrow supply is so extremely useful for the garden supply, but without great expense the option close by of pure water for drinking, etc., should be given. The usual supply for the whites is rain-water, in tanks, nearly every house having such, the tanks being usually of galvanised iron.

The supply for the Cape Police is by boring. The camp is in the town, just on the rise. The request will be to have a public pipe and tap, and payment for use.

(b) Sewerage and Drainage.—Nil.

(c) Night-soil, etc.—Nearly every house has proper accommodation for such, which is cleared away weekly by a man specially appointed. In one or two cases of deficiency in such they have been warned to rectify and supply the want. In one particular case, night-soil was never cleared away, but a water stream diverted to run under the seat, the refuse being flushed into a spruit lower down, which was used by natives for drinking, washing, etc. This I closed at once. The dumping-ground and pit is unsatisfactory as regards site; that has been reported to the Local Authority, and will be altered.

(d) and (h) Overcrowded Dwellings and Native Location, etc.—This is solely limited to the Native Location. The matter was recently thoroughly investigated on the spot, each house, by the representatives of the Municipality, I being also present, and was rectified as far as it possibly could be.

(e) Slaughter-houses, etc.—Slaughtering of sheep and cattle is done in the open, and the offal cleared away.

Bakeries.—There are two here, clean and well managed.

Dairies.—Milk and butter is obtained from neighbouring farms; they are satisfactory.

(f) Food, etc.—Samples of food, alcoholic drinks, etc., have been recently sent to Cape Town. No report has been received as yet. If unfavourable, the necessary steps will be taken.

(g) Keeping of cattle, swine, etc., is as satisfactory as possible.

(i) Cemeteries are satisfactory.

(m) I vaccinated considerably over 2,000 persons (white and coloured); the successful cases reaching as high as 70 per cent. It was impossible to be exact, owing to the large number, number of centres, distances, etc. In each case my informant was a reliable man at whose house the vaccination had been carried out, and he was asked by me at the time to inquire regarding the results. As regards the Small-pox outbreak it was

limited entirely to the coloured, nearly all Kafirs, not one case occurring in an European, and had broken out before I came here as Locum Tenens. The first step I took was to change the site of the Camp, and separate cases from contacts, thereby diminishing length of quarantine and expense. It was then in the immediate neighbourhood of Seymour, and some length of time after it broke out, or rather declared itself, at the extreme limits of the district, having come from the Beaufort district. As far as I could ascertain, it was more recent and prevalent there. The whole epidemic was mild in character or type, was easily suppressed, and there was only one death, an infant of about a year old.

Leprosy.—I saw one case at Hertzog Village, seven miles off, of long standing, mixed, tubercular, and anæsthetic. It was reported and sent to Robben Island.

Diphtheria.—One fatal case occurred in a Hottentot child and was reported at once, and steps taken to isolate and prevent spreading.

Malignant Sore Throat, but not considered to be Diphtheria.—I saw one case of this form, fatal in England. This form is caused by foul germs grafted upon ordinary Sore Throat (the Acute Tonsillitis). The germs are *not* Diphtheritic. The symptoms are acute, whilst Diphtheria is the other extreme. The *disease, as well as Tuberculosis*, should be included in the Notification Diseases Act. The patient was a Dutch boy.

Typhoid (or Enteric) Fever.—Nil. Not one case was met with.

Tuberculosis.—Several acute, Pulmonary type, fatal (Galloping Phthisis), Pulmonary Tuberculosis, without a doubt, should be *notified*, and steps taken to prevent its spreading, as far as possible. I have not seen a case here among the white population as yet. One case seriously ill at present occurred in a middle-aged woman (Kafir or Basuto), the right lung being affected, the whole of the upper part breaking down; in my opinion the disease was contracted from nursing her nephew, a recent fatal case. Full information was given as to the importance of spitting into a receptacle containing antiseptic, which I ordered them to get. The sputa would be teeming with germs and spores, which only required to dry and be disseminated.

Plague.—Nil. It was reported that this disease was among the rats some time back, and coincidentally three cases of Acute Pulmonary Disease occurred in the Location (Native), one a male, fatal, two females, recovered. Sputa resembled Plague sputa exactly, but on microscopic examination of sputa in each case, and of the liver, etc., in the fatal case, it was found not to be Plague.

70. STUTTERHEIM.

DR. S. J. O'LOUGHLIN GRINSELL, DISTRICT SURGEON.

(a) Water-supply.—1. District.—The district is intersected by numerous streams, the water being of great purity. The supply during the year was sufficient, but in the latter months of the year during the period of the general drought was not of course nearly as ample as usual. The drought, however, though serious enough, was not nearly as severe as in other districts of the Colony, the hilly nature of the country with its well-wooded slopes, conducing to a more even rainfall than in many other less favoured areas.

2. Village of Stutterheim.—No alteration in the supply has occurred. The water is conducted from springs in the Amatola Mountains, about five miles distant by two open furrows. The water is of great purity at

its source, but speedily during its transit to the village becomes open to contamination. The chief supply for drinking and household purposes is rain-water stored in overground tanks. The Municipal authorities are moving in the matter of a pipe supply, and I understand arrangements have been made for an early survey being made. No epidemic has been traced to the water-supply. The following information is obtained from the Rev. Mr. Beste, who has compiled it from his monthly reports.

Month.	Rainfall.	Raindays.	Temp. Max.	Temp. Min.
January	1·24 inch.	10 days	99·0F.	47·0F.
February	2·53	13	98·0	49·5
March	1·33	12	88·5	38·0
April	4·61	14	86·0	39·0
May	2·65	5	80·5	41·0
June	0·41	4	75·0	36·5
July	0·17	5	75·0	32·0
August	1·37	7	78·0	35·5
September	0·09	3	94·0	33·5
October... ..	1·51	10	96·0	34·0
November	2·93	16	87·0	41·0
December	3·95	12	98·0	47·0
Total	22·79	111		

Average yearly rainfall since 1885—30·50 inch.

Last year's rainfall of 22·79 is with the exception of 1900 (21·23) the lowest annual rainfall in the last twenty years. During that period the highest rainfall (yearly) was 47·63 inches in 1891.

(b) Sewerage and Drainage.—Nil.

(c) Collection and Disposal of Slop-water, etc.—Night-soil.—The pail system of collection is in general use. The contractor does his work in a satisfactory manner. The contents of the buckets are removed as often as necessary and buried. At the request of the Municipal Council I submitted a combined scheme for the collection and disposal of night-soil and slop-water. For the present I understand the scheme has been shelved, but I trust the matter will again shortly occupy the attention of the Council.

Household and Stable Refuse, etc.—This is removed by Municipal scotch cart weekly or oftener.

(d) Overcrowding and Dwellings Unfit for Human Habitation.—No instances have been brought to my notice.

(e) The Management of Slaughter-houses and Butcheries.—The slaughter-houses are situated outside the village area.

The bakeries are well conducted.

There are no recognised dairies.

(f) The Sale, Storage and Preparation of Human Food.—Our sole manufacture is sodawater, for which the filtered river water is eminently suitable. The only sale of any importance of vegetables, butter and eggs occurs on the weekly market, no retail trade being done in these articles. The purchasing of sufficient quantity of vegetables to last a large family for the week is apt to lead to a large quantity of decayed vegetable matter being present towards the end of the week with the resultant, a probable contamination of the milk and the basis for an outbreak of Infantile Diarrhœa.

(g) Keeping of Cattle, Swine and Other Animals. The herding of cattle, swine and sheep still goes on within the village area. I have represented to the Council if this is to be allowed the necessity for rigid daily inspection of the premises where this practice exists.

(h) Native Locations.—My remarks under this heading last year may be considered as still applicable.

(i) Cemeteries and Burial-grounds.—The local cemetery is suitable in every way for its purpose.

(k) Abatement of Nuisances Generally.—The adoption of some scheme for disposal of slop-water is necessary. In a village such as this the item of expense entailed for the development of a proper system is the great difficulty, and unless the scheme be fairly perfect I prefer to allow the old method of scattering the slops over vacant pieces of ground. As already stated, I consider a very rigid daily inspection necessary of those premises where kraaling goes on.

(l) Hospital Accommodation.—The only hospital accommodation is that which exists in the gaol, this not being available for public purposes.

(m) Infectious Disease, etc.—No case of Enteric Fever or Diphtheria occurred during the year. One case of Small-pox occurred. The case was that of a male native adult in the employ of a farmer, about four and a half miles distance from the village. The boy had recently returned from a holiday. The case was speedily isolated on the 19th March and discharged cured on the 20th April. No other cases occurred. The authority involved was the Municipal Council, who did everything possible to assist me. The case was unvaccinated. I carried on vaccination in the vicinity. The total cost of the outbreak was £34 2s. 7d.

During the past year the mortality, both black and white, has been abnormally high. This high death-rate could not be credited amongst the white population to any special classes of disease. Chest diseases, Phthisis and Pneumonia, especially claimed a great percentage of the native deaths, Diarrhoea (Infantile) being also very prevalent. The Rev. Mr. Beste, who has been practising in this district for the past forty years, informed me that Phthisis amongst the natives was almost unknown in the early days of his work. He attributes the present prevalence of this disease, which is undoubtedly assuming serious proportions, to the change in food and clothing associated with immorality and inebriety. To these causes I would add the overcrowding at night with the faulty ventilation in the huts and the native habit of covering the head whilst sleeping.

71. SUTHERLAND.

DR. R. H. H. HAYDEN, DISTRICT SURGEON.

(a) The water-supply may be said to be derived from the following sources:—

(I.) Rain-water collected in tanks from roofs of houses by private persons for private consumption, mainly for drinking purposes. The water is liable to contamination from dust on roofs of houses and in gutters, more especially so as the residents never take the precaution of letting the roofs get washed down by the first rain before beginning to collect water in their tanks.

(II.) Surface wells which are subject to be contaminated by percolating dirty water from the surface as well as from dust being blown into them as none of them are dust proof on top and some have got practically no covers, and as a result I have seen large quantities of filth, stones, tins, ropes, chains, etc., etc., being taken out of some of these wells when they are being cleaned, which cleaning is done when an owner thinks well of doing so and has spare time and energy enough to do so.

(III.) Deep wells which are made by digging a pit to the bed rock and then sinking a hole by a diamond drill for various depths up to one hundred feet. The water almost always rises above the bedrock through these holes and collects in the pits, and is therefore subject to the same pollution from dust and percolation as the shallow wells. The water from these deep wells smells strongly of sulphuretted hydrogen, which is formed by the presence of iron pyrites and organic matter in the water. This water is very unpleasant to drink when freshly pumped, but when permitted to stand exposed to the air for a few hours it loses this unpleasant flavour.

(IV.) Water brought from the adjoining hills in an iron pipe and collected in a cement reservoir for gardening purposes, but some persons collect water for domestic purposes from the pipe where it discharges into the reservoir. This water where it is collected on the hills is really the filtration from a dam which is situated higher up on the hill, but is fairly well purified by filtering through some hundred yards of soil before it again appears in the form of a spring.

(V.) A surface well situated in the veld some distance from the location, and which provides water for the natives who reside in the location.

I would recommend that all wells should be plastered out with cement to prevent percolation from the surface, also that they should be covered with dust-proof covers; that no water be taken out of them by buckets attached to ropes, sticks, chains, etc., etc., and that they be well cleaned before the approach of summer in each year.

(b) There is no sewerage or drainage of any kind in this village.

(c) The bucket closet is in use here, and it is a difficult matter to know how to deal with the number of closets and the emptying of same. According to the Municipal Regulations "every house or separate tenement must have proper privy accommodation." Well, this apparently means a privy for each tenement, and if this rule was carried out the village would be nothing but a collection of privies; but the rule is not acted on and the fault is in the other direction, and there is not sufficient of such accommodation, the result being that stables and shady corners are used for such purposes by some people. Then again there is the vexed question of how these privies are to be emptied. According to the regulations the Municipal Council should have such work done, but then it is impossible to get anyone to contract for such work who would carry out the work properly and do it at anything like a reasonable figure, the result is that each householder is left to have his tub emptied when he thinks fit. During the year the Municipal Council called for tenders and got a contractor to empty the buckets and levied a tax on each tenement varying from two shillings and sixpence to ten shillings per month according to the circumstances and number of inhabitants in each residence. This contract was entered into for three months, and at the expiration of that period it was found that the work was so badly and indifferently done, as well as the difficulty of collecting the tax from farmers who keep temporary residences in the village that it was better to revert to the old plan and let people have their tubs emptied by private labour when they wished to do so.

There is a large hole some distance from the village where the tubs are emptied into.

Slop-water is thrown in the yards and gardens, but on many occasions very near the kitchen doors, and quite indifferently as to the proximity of wells.

Refuse is usually piled up in the yards in heaps or in bags until the proprietor thinks well to have it carted away to the veld or until some chance offers of having it taken away on the cheap.

For many years this rubbish was deposited at a place sufficiently distant from the village, but during the military occupation of this village by

an irregular corps whose habits were just as wanting in regularity as the corps and who for want of more energy cast all their tins and rubbish just on the border of the village, and now the same practice is sometimes indulged in at night by those inhabitants who have their rubbish carried away in wheelbarrows or in sacks. The Municipality are trying to put a stop to this practice.

(d) At ordinary times I know of no overcrowded dwellings in the village which are occupied by white persons, but at Nachtmaal and other periods when there are many farmers in the village there is considerable overcrowding, as sometimes large families huddle into one small room.

In the location there is a considerable amount of overcrowding, in fact I know of one hut which was large enough for three inhabitants, allowing only three hundred cubic feet per head, and in which no less than ten persons slept night after night. I have on different occasions brought this matter of overcrowding in the location to the notice of the Municipal Council, but that body which talks a lot, but does little, has taken no steps to prevent this overcrowding. I am of opinion that this overcrowding in the location as well as amongst some natives who live in the village is accountable for very many of the deaths amongst the coloured population, the death-rate amongst these natives being apparently very high, but as I do not know the number of the coloured population, I am therefore unable to state the percentage of deaths amongst them.

There are several huts in the location which are unfit for human habitation, owing to the roofs being not above five to six feet above the ground, and in many instances the floor of the hut is lower than the outside ground, as well as want of sufficient and through ventilation.

It is very necessary that this overcrowding in the location should be looked into.

(e) There are two licensed butchers in the village. These butchers have to kill their sheep and goats at the kraal which is about half a mile from the village.

The shops where the meat is sold are in a satisfactory condition.

One or two private persons bake bread in their private houses which is sold in one of the shops. I have no power to enter a private kitchen to inspect how this baking is done, but I am of opinion that the baking is done under satisfactory conditions.

Some few people keep one or more cows for supplying milk for their family use and sell any surplus milk they may have. I know not of any infectious disease having been in any of the houses of these persons who sell milk during the year.

There are no trades which are prejudicial to the public health.

(f) Nothing to comment on under this head.

(g) Sheep and goats are kept at night in a kraal about half a mile away from the village, and run on the commonage in the day.

Milch cows are sometimes kept in the yards at night and sometimes run on the commonage at night as well as during the day.

Swine are very few, and are beneficial rather than injurious to the public health, as they act as scavengers.

(h) The order in the location is good, and with the exception of an occasional controversy, the result of drink, there is practically never any disturbance there.

(i) There is a cemetery just outside the village which is under the control of the Dutch Reformed Church. At present there are no dwellings sufficiently near to it to render it injurious to health.

Almost every farmer has a private cemetery on his farm.

(k) No improvement on this point.

(l) There is no hospital accommodation for treatment or isolation of infectious diseases in this village or district.

(m) There have been seven cases of Enteric Fever in the village during the year. These cases have probably arisen from old enteric stools which were cast all about in days of military occupation. It is very noticeable that most of these cases have occurred in the vicinities where camps were pitched from time to time during the war.

Of Small-pox cases we have had none.

There have been twelve Diphtheria cases in the village and one in the district. The case in the district was in a European who may have been infected from an adjoining district. Of the twelve cases in the village and location, five occurred amongst Europeans and seven amongst coloured persons.

The Diphtheria cases were notified on the following dates:—

7th March, in district, European child, recovered.
 25th May, in village, European child, recovered.
 28th May, in village, European child, recovered.
 30th May, in village, European child recovered.
 30th May, in village, European child recovered.
 13th June, in village, European child, recovered.
 15th June, in village, coloured child, recovered.
 29th July, in village, coloured adult, recovered.
 30th July, in village, coloured child, recovered.
 29th October, in village, coloured child, died.
 29th October, in village, coloured child, died.
 24th November, in village, coloured child, died.
 3rd December, in village, coloured child, died.

The Enteric cases were notified on following dates:—

21st February, in village, European adult, died.
 1st March, in village, European child, recovered.
 4th March, in village, coloured child, died.
 22nd April, in village, European adult, died.
 16th March, in village, coloured child, recovered.
 8th December, in village, European adult, recovered.
 8th December, in village, coloured child, recovered.
 22nd April, in village, European child, recovered.

Amongst the whites no steps were taken to prevent the spread of the disease, either Enteric or Diphtheria, beyond explaining to them the nature of the disease and how infectious it was when it occurred in a house, and warning them to prevent other persons coming to or going to a house which was infected, and by thoroughly disinfecting the house and clothing when the case recovered or died.

Amongst the natives the infected houses were watched, and any person who entered an infected house had to remain there until the house had been disinfected after the recovery or death of the case.

I know not what was the amount expended in preventing spread of infectious disease in the village, but there was nothing spent by the Divisional Council for such purpose in the district beyond paying the Health Officer his salary of £15.

There has been no vaccination tour in the district this year as the tour was not authorised until too late in the year so that it could not be done without interfering with the harvesting in the district, and according to a circular, vaccination tours should be arranged so as not to interfere with farming operations, and should children and some adults be vaccinated in

December it would prevent them helping to bind the corn, etc. The vaccination in the village has been successful in almost every case vaccinated.

There has been no Bubonic Plague in this district, neither has there been any Scurvy or Epidemic Pneumonia.

72. SWELLENDAM.

DR. GEO. J. CHADWICK, DISTRICT SURGEON.

(a) The water-supply is good and pure, and a scheme will shortly be commenced for leading the water through pipes, instead of as now by open furrow.

(b) There is no drainage, but a night-soil cart removes the pails.

(c) The covered pails are collected at night by a stercus cart, and the contents buried at a safe distance from the village.

(d) There is no overcrowding, and the dwellings are good.

(e) All are managed satisfactorily.

(f) Satisfactory and with due regard to health.

(g) Cattle and swine are kept in sheds, kraals, or sties, and well looked after.

(h) There are none.

(i) Cemeteries and burial-grounds are well kept, and at least a quarter of a mile from the village.

(k) There are no nuisances requiring abatement.

(m) There has been no epidemic during the year, except Influenza and a mild outbreak of Chicken-pox. One or two cases of Enteric have occurred, not in my practice. There have been no cases of Small-pox. One case of Leprosy was sent to Robben Island.

73. TARKA.

DR. WM. H. FERGUS, DISTRICT SURGEON.

(a) The water-supply of the village is derived from a spring arising about half a mile from the town to which it is conveyed by iron pipes to a masoned reservoir situated at the upper end of the village. The supply for domestic purposes is taken as it flows from the pipe before it reaches the reservoir, it is pure and ample, and not liable to pollution during its course from the spring; the surplus water collected in the reservoir is used for irrigating the gardens in the village; it runs in open furrows and is liable to be polluted in its course through the village. The spring arises in the town commonage and is under Municipal control.

A large number of houses are provided with iron and underground tanks for the conservation of rain-water, which is extensively used for domestic purposes. There has been a decided weakening of the public spring during the last few years owing to the diminished rainfall.

(b) Within the Municipal area there is no system of sewerage, and storm-water is disposed of by open furrows traversing the streets, and which discharge into the large spruit that runs parallel to the village and which separates the European quarter from the Native Location.

(c) Night-soil is disposed of by the pail-system, and is under Municipal control; it is carted a considerable distance from the village and deposited in trenches which are filled in with soil.

Slop-water and other refuse are not disposed of in a systematic manner, nor is the disposal of these under Municipal control. The methods mostly employed are cartage to the dongas near the village or burial in the gardens and in some cases it is merely thrown into the backyards or into the streets.

(*d*) These are not found except in the Native Location, where overcrowding does occasionally occur, but not to any great extent.

(*e*) The slaughter-house is under Municipal control; it is situated at a safe distance from the village, and is kept in fairly good order. Butcheries and bakeries are kept in good order. Dairies as such do not exist. Many of the townspeople keep one or two cows in their yards, the surplus milk from which is sold to their neighbours.

(*f*) There is nothing objectionable under this head.

(*g*) Milk cows are kept in considerable numbers and do not as a rule give rise to serious inconvenience. Sheep are kept by some of the butchers in the yards behind their dwelling-houses. This is a most objectionable practice, and constitutes a grave nuisance. Swine are not allowed within the village, but a considerable number are found in and about the Native Location.

(*h*) The condition of the Native Location is open to serious criticism, and I am strongly of opinion that more should be done towards improving the sanitary condition and general cleanliness and tidiness of the location. The interior of the houses are kept clean by the natives, but the streets are littered with all kinds of rubbish. The latrines for the use of the natives are generally in a filthy and dilapidated state. The lower end of the location is intersected by sluits and furrows, and these are the receptacles of every imaginable kind of litter and rubbish.

(*i*) These are situated at a distance from the village and are kept in good order.

(*k*) The chief nuisance is the presence of large numbers of sheep and goats in the centre of the village. These should be kraaled away from the houses.

(*l*) With the exception of a Lazaretto or Small-pox Hospital, situated about two miles from the village and under the control of the Divisional Council, there is no provision either in the town or district for the isolation and treatment of cases of infectious disease. This lazaretto would accommodate about ten patients. In the past it has been used by the Municipality as well as by the Divisional Council.

(*m*) A few sporadic cases of Enteric Fever ran a mild course during the year, but there was no general epidemic. The cases did not exceed six, and were traceable to drinking impure dam water.

After an absence of fifteen or sixteen years (during that period isolated cases did occur), a severe epidemic of Diphtheria broke out in the Vleckpoort Ward of the district. The first case occurred on the farm Blaas Kraal in the beginning of November, when a youth of sixteen years of age developed throat symptoms of a very severe type. The disease was thought to be an abscess of the throat, and as the parents were in somewhat poor circumstances, medical aid was not called in till the day on which the patient died, nor was the illness reported to the authorities during its course. Following the usual custom of the country, and being ignorant of the infectious nature of the disease, the patient was visited by friends and acquaintances living on the same and the adjoining farms. Shortly afterwards there was a general outbreak of Diphtheria on these farms; seven in all were affected. The disease was of a very severe type, and before it was brought to the notice of the authorities several deaths had occurred. In all there were about twenty cases of throat complaint, and of these eight children died. The steps taken by the authorities after

the epidemic came under their notice were the placing of the affected farms under quarantine and the free use of anti-diphtheritic serum in the case of those suffering from the disease and of all children exposed to the infection. As soon as these measures were taken the epidemic began gradually to die out, so that by the end of the year not more than one or two cases were under treatment. In this epidemic only Europeans were affected.

Two or three isolated cases occurred on farms in the district remote from Vleckpoort, and one case occurred in the village. These isolated cases all recovered.

Small-pox was absent from the town and district during the year.

Scarlet Fever of a mild type was pretty general.

The Local Authorities afforded the District Surgeon every assistance in dealing with the outbreak of Diphtheria.

Vaccination was carried out both in the town and district with decidedly better numerical results than were obtained the previous year. I have again to draw attention to the marked indifference on the part of both Europeans and natives to the necessity of vaccination, and I am strongly of opinion that until it is made compulsory it is certain to be evaded by a large section of the community. The lymph used was obtained from Grahamstown, and was of excellent quality, and gave good results.

There were no cases of Bubonic Plague in this area. Rats were not prevalent, and the few isolated ones which were discovered were accidental importations by train from other parts. No case of disease amongst rats was brought to the notice of the authorities; no special steps were taken for their extermination.

Scurvy and Epidemic Pneumonia were not prevalent during the year.

With the exception of the epidemic of Diphtheria above referred to there was a marked freedom from severe infectious disease during the year in the town and district.

74. TAUNG.

DR. CHAS. WM. BROWNE, DISTRICT SURGEON.

The bulk of this report is merely a repetition of last year's, with the exception of the account of vaccination done, and the working of the Contagious Diseases Prevention Act.

(a) Owing to the long-extended drought, the water-supply is less than ever, and wells which have never been known to give up are almost dry. For instance, one well which had for years supplied the parsonage of the London Missionary Society here, has completely given up. There is nothing it seems to be done, but to bore.

(b) to (i) As last year's report.

(k) Nothing has been or I fear can be done.

(l) There is no hospital accommodation.

(m) There has been no Enteric Fever, Diphtheria, or Small-pox. There has been a good deal of pronounced poverty in the district, and a considerable number of poor old helpless people, widows, blind persons, etc., who in past years have been assisted by their relations and friends, now that their friends and relatives can barely help themselves, have been receiving relief as paupers.

From about the last week in May, the Contagious Diseases Prevention Act has been in operation, people from all parts of the district receiving out-door relief, and so far in a large number of cases with very favourable results.

The natives are gradually being trained to coming in regularly for medicine; but one difficulty is that many of them fancying they are cured, and many are nearly so, fail to report and lapse from treatment. These people I am trying to get hold of, a difficult matter in such a large and scattered population, so that if cured I can mark them as such, and if not, cause them to continue treatment till they are. They have not grasped the fact that Syphilis is not easily eradicated, and feeling better, think they are all right. Still there remains the fact that a considerable number of cases are steadily improving, and that deformities are being prevented or arrested. I have had some terrible cases of mutilation, which have improved immensely.

One youngster whose foot was nearly off, came in, held on a horse; now he walks in some miles. Another patient who could from his face hardly be recognised as a human being, eyes, mouth, nose seeming almost one, begin now to wear something of the aspect of a man, the large raw red surface nearly all healed, leaving him with a white instead of a black face. Large ulcers in hips, thighs, legs, from broken down gummata, almost preventing walking, healing up fast, one such case has just turned up whilst I am writing who could hardly crawl when I saw him first, now walks fairly well, and ulcers are disappearing. A large number of patients have nasal disease, and many have lost the nose entirely, but the destructive process is nothing like so speedy in them as it is in many races. There is great difficulty, in fact it is almost impossible, to ascertain the seat of the original lesion. I have only seen one, and there I cannot find out how it was acquired, a married woman I suspect, but cannot prove. As a rule nearly all the now existing cases, at least those I have seen, have been innocently acquired. They eat, drink, smoke, and mix together, and many cases never come under treatment till they had become a nuisance to their neighbours from their unsightly appearance. But now they are getting more wide-awake and come sooner, and I think I have arrested the diseases in many nasal cases, and prevented mutilation.

From the 18th of May up to December 31st, 1903, there have been 201 patients on the register, of these eighteen are dead, mostly old worn-out cases broken down from the effect of old gummatus ulcers. Fifty-eight have lapsed from treatment, of these I know that some are almost cured, and of most I am certain they are much better; of these some will probably resume treatment (as one did a day or two since), especially if they get reminders.

One hundred and twenty-five remain on the register, they are mostly improving, some who were too bad were seen at their homes. In eight weeks I have used 7 lbs. of Iodide of Potassium. I can only wonder that these poor people were not put under the provisions of the Act some years ago. Had the Act even been enforced after Circular, June 1, 1898, many lives might have saved, many mutilations spared.

A very extensive vaccination was carried out early in the year, and as there had been no vaccination tour since October, 1900, a very large number of operations were performed, 3,171 being the total reached, of these only sixty-nine were re-vaccinations, 378 were over ten years of age, 2,793 were under; it was emphatically a vaccination of infants. It is impossible to classify these into "Believed to be Successful," or the opposite, not having been seen again after the operation, but from reports which reached me from all quarters I have every reason to believe that there was an overwhelming amount of successful cases. I propose during the next vaccination tour to muster, at each centre, all those vaccinated in 1903, and to ascertain as far as possible the number of successes, tabulate them, and make a special report thereon.

To separate, on supposition, cases male and female, into successful or unsuccessful is impossible, and any results so obtained would be valueless as statistics.

In Taung itself only forty-four children were vaccinated, and those practically speaking, not residents of our native village, which has a population of about 5,000, and of this number there are probably 1,000 children not vaccinated. The stad is some distance from the Magistrate's Office, the Chief's house being about two miles distant, and some portions of the stad much farther.

75. TULBAGH.

DR. HENRY P. PAYNE, DISTRICT SURGEON.

The public health duties performed by me during the past year were medico-legal duties, public vaccination, the treatment of contagious diseases, examination of alleged lunatics, and the treatment of Small-pox cases.

(a) A supply of good potable water is brought down from a mountain spring by pipes and distributed to each house in the village. It is worthy of note that since this water has been in use—about five years—no case of Enteric Fever has originated in the village, although several cases have been imported from other districts. Before this period the drinking water was baled out of an open furrow, and cases of Enteric were numerous every year.

(b) There is no sewerage.

(c) Cess-pools are not allowed, and the tub system is in use, the Municipal Council removing and cleansing the tubs in an efficient manner.

(d) I do not think there is any overcrowding. The inhabitants are fairly well housed, and actual pauperism, in the European sense, is very rare indeed.

(e) No slaughtering is allowed in the village, and the four slaughter-houses in the district have always been well kept when I have inspected them.

(f) There is now no cause for complaint on this head.

(g) In some cases pigs are kept nearer to dwelling-houses than is advisable, but there has, however, been considerable improvement in this respect during the last three or four years.

(h) As far as the houses are concerned, the location is cleanly, but the roads therein should be more frequently brought under the hands of the scavenger.

(i) The burial-grounds are not likely to be prejudicial to the health of the community.

(l) There is a small lazaretto about half a mile from the village, which affords rough accommodation for, say, four natives, but could not be utilised for white persons. This was used during the late Small-pox outbreak, but it was necessary to supplement it with tents. Epidemics are, however, so infrequent that the erection of a larger permanent hospital would be scarcely justified.

(m) Infectious Disease.—During the year no other disease of this nature than Small-pox, occurred. The first case was noted on April 3rd, a woman who walked into my office with her face covered with putsules, about eighth day of disease. After considerable trouble it was ascertained that somewhere about three weeks before (it was impossible to get at the exact date) she had slept in a hut at Hermon Station, from which a

case of Small-pox had been removed. The outbreak was confined entirely to her family and two other natives living in an adjacent hut. The total cost incurred in dealing with the outbreak was £121 17s.

76. UITENHAGE.

DR. R. G. LAMB, DISTRICT SURGEON.

(a) The condition of the water-supply is exactly the same as last year, and may be classed as excellent.

(b) There is practically no system of drainage or sewerage, though I believe the Council are beginning to take steps in that direction.

(c) This is conducted as heretofore, but there is no regular system for the disposal of slop-water, household and other refuse.

(d) The town is somewhat overcrowded still, owing to there being more inhabitants than there are dwellings to accommodate them, building is however proceeding briskly. Dwellings unfit for human habitation are taken in hand by the Council.

(e) These are all in a good state, and are supervised by the Council.

(f) There are a few kept in town, but under proper restrictions.

(h) The locations were never in better order nor more cleanly, the Council having adopted the most vigorous measures at the time of the Small-pox epidemic.

(i) Kept very well, a great improvement being visible of late years.

(k) The Council keeps a very vigilant eye for their suppression.

(l) Up to the present there has been no hospital in town or district, but I am pleased to say after many years of patient waiting, a very nice Cottage Hospital has been erected and will be ready for occupation very shortly; this will be a general hospital. There is one on the Flats, containing two rooms, for patients afflicted with Syphilis, but it has not been used for that purpose for years owing to there being no cases reported. There appears to me to be a great lack of interest in the seeking out of cases of this nature. I do not know upon whom the responsibility rests. The Resident Magistrates have from time to time given orders, I believe, for vigilance to those under them, but no result follows.

(m) There was a marked improvement last year in the number of Typhoid cases, twenty-two being the number registered, and some of these came from outside.

Diphtheria.—I believe two cases occurred. Small-pox, however, numbered 161 with eleven deaths; three of these were found dead. This applies to the town.

In the country I had forty-two cases with no deaths. There were however many cases treated by Field-Cornets, and another medical man was engaged to attend to the Small-pox in the country, as my duties in town were becoming so arduous that I could not attend to both.

With regard to the pre-vaccination of some of those attacked with the disease, a large number were vaccinated at some period, long or short, previous to the exposure of infection, and some, though not many, were vaccinated after the exposure, such cases usually being very mild. It would be impossible to state accurately how many were successful, as it was not made imperative on all those operated on to return on the seventh or eighth day.

With regard to the cause of the Enteric Fever, which occurred here, I cannot glean any information.

On the whole, I should consider the health of the town for 1903 better than in previous years.

I wish to point out, as I have done for the past ten or fifteen years, the necessity of each parent registering with the Registrar of Births and Deaths the vaccination of every child of three months within the prescribed time. The Registrar could then at a glance say who had not complied with the regulation. In this way not a single child would escape undergoing the operation.

77. UNIONDALE.

DR. H. MUNRO MACKENZIE, DISTRICT SURGEON.

(a) The water-supply remains the same as last year. There was heavy fall of rain (·75 inch in three-quarters of an hour) in October, and for some time afterwards the water in the pipes was very much discoloured, showing imperfect filtration, but latterly it has been quite clear again. Owing to the very small rainfall during the last year, only 7·33 inches, the water-supply is becoming very weak. I think there will always be a sufficient quantity for domestic purposes, but there is very little even now for irrigation, and it is getting less every week. I believe the Municipality is considering the feasibility of building a dam to conserve the storm-water, which would be a great advantage, if we could only get the storms, but there was only one good one during the year.

(b) This remains the same as in my last report.

(c) This also remains the same. Owing to a complaint made by a farmer living at a little distance from the depositing pits, the latter were inspected by the Acting Medical Officer of Health for the Colony (who happened to be passing through Uniondale at the time), the Mayor and myself, in November, and we came to the conclusion that the site was not an ideal one, but almost as good as could be procured, that with ordinary care there was no risk of polluting the river, that the pits are not offensive, and that there were no grounds whatever for the complaint. I may state that this was shortly after the heavy rainfall mentioned above, when the pits were very much more moist than usual, and therefore more likely to be offensive. We also inspected another site, which the Municipality wished to procure for depositing pits. This site would be better than the present one, inasmuch as it would be further from the river, and by sinking a bore-hole to no great depth, I believe a good supply of water for washing the pails could be obtained. The drawback, however, is that it is on ground belonging to the farmer who made the complaint, and I believe he declines to sell, although he was offered a good price for the piece of ground.

(d) Same as last report.

(e) I have nothing new to report under this heading.

(f) During the year samples were taken of foods and liquors, and sent to Cape Town for analysis. There was one prosecution for selling brandy, which, I believe, was only 1·5 degrees under the strength allowed by law, but the seller was able to prove that the brandy was sold as received by him, and was acquitted. I have not heard of any other complaints in this respect.

(g) I must again complain about the way in which swine are kept in the town. I know that in some instances they are a decided nuisance to their neighbours, owing to the uncleanly state in which the pig-sties are kept. I understand that there is a Municipal bye-law which forbids

owners of swine to let them run loose, but this bye-law does not seem to be enforced in any way, as swine may be seen roaming about the streets at any time. This is especially the case at night, when they seem to be let out to feed, generally on nights when there is no moon, and then they are a great nuisance in the gardens. I can speak from bitter experience, as my vegetable garden has been twice gutted, and I have been unable to catch the offenders. As I am not Medical Officer for the town (none has been appointed as provided for by the Public Health Amendment Act, 1897), I can do nothing further than again recommend that swine should not be kept in the town at all, unless stricter regulations could be framed and enforced, but I have found that recommendations are of very little use, as no notice seems to be taken of them.

(h) This remains the same as last year. If anything, I should think that it is getting more crowded, owing to the increase of population.

(i) The English and Dutch Reformed cemeteries remain the same as formerly, and are in good order. Coloured people are at present still buried in the cemetery adjoining that belonging to the Dutch Reformed Church. This cemetery is very crowded, but a piece of ground has been applied for on the Municipal Commonage, about three-quarters of a mile outside the village. The Jewish community has also applied for a site for a cemetery, adjoining that applied for by the coloured community. These sites are quite suitable in every way as regards soil, and sub-soil, and surface drainage, and I have recommended that the applications be granted.

(k) The only nuisance that I am aware of is the keeping of swine in town mentioned above, and there is certainly no abatement of this.

(l) There is no hospital accommodation in the district for the isolation and treatment of infectious diseases. There was some talk at the beginning of the year about building a small hospital for the treatment of contagious diseases, but nothing has come of it.

(m) There have been no cases of Small-pox in the district during the past year.

I reported two cases of Scarlet Fever to the Divisional Council, as occurring on a farm about eight miles away, in September, both of which recovered. I have heard that other cases of Scarlet Fever and also of Typhoid Fever have occurred both in the town and district during the year, but I have not come across any in my own practice, and none have been reported to either of the Local Authorities.

I heard on good authority that a case of Scarlet Fever occurred in a house from which milk was supplied, but as I was not attending the case, I could not move in the matter beyond going elsewhere for my milk.

There was an extensive outbreak of Measles of a fairly severe type, lasting from the end of May to November, but as this is not a notifiable disease, I am unable to give any estimate of the number of cases. There were also a few cases of Rubellā during the same period.

Vaccination.—In the early part of the year I performed public vaccination at eight rural centres, at which 669 persons presented themselves. The lymph was obtained from the Bacteriological Institute, Graham's Town, but as no second visit was allowed, I am quite unable to give any idea of the amount of success obtained. The number of persons who presented themselves was very much below what I expected, especially considering the fact that this was the first vaccination for three years, owing to Martial Law, and I can only account for it on the ground that there were far too few centres. In August, when applying for authority to make the vaccination tour during the current financial year, I pointed out that the district is in a very bad state as regards transport, and that it was, in my opinion, impossible to expect people to come such long

distances on foot, and bring their children with them. I recommended that eight new centres be made, bringing the total number of centres up to sixteen, which I consider is not too many for a district having an area of nearly 1,700 square miles. The amount allowed for vaccination at the eight centres last year was £36, but the actual cost was only £26 3s. 6d. I estimated that vaccination at the sixteen centres, which I recommended for this year, would cost £43 16s., as several of the centres could be visited either going to or returning from other centres, so reducing the cost of transport.

I gave notice four times during the year that I would perform public vaccination in the urban area of Uniondale. On the first occasion no persons appeared; on the second, one; on the third, sixty; and on the last, again none. As many of these were children two or three years old, and as there must have been far more than sixty births during the year, there must be a considerable number still not vaccinated.

There were no cases of Bubonic Plague in this district. There are plenty of mice in the town, but no rats at all, and I believe the same applies to the whole district.

During the year twenty-six persons were treated under Part II. of "The Contagious Diseases Prevention Act, 1885." Of these eleven were discharged cured, four died, two lapsed from treatment uncured, and nine remain under treatment. No less than thirteen of these were discovered on one farm, about twenty miles from here, where they were living in the bush, presumably on what they could steal, as they had no other visible means of subsistence. I have no doubt that this is what caused the farmer to report the matter. I am sure there must be many more cases in the district, but no one takes the trouble to report them to the Magistrate, and it is only very occasionally that I happen to come across one. I must say, I think it would be a very good thing if a small Contagious Diseases Hospital could be built, as these thirteen cases were all in the secondary stage, and therefore highly contagious, and they had to be segregated on the top of a kopje near the town, which was by no means an ideal site, but the best that could be obtained. Also, I had the greatest difficulty in keeping them there, as they wished to go home as soon as they began to feel themselves getting better. In fact one man did abscond, but returned at the end of six weeks, when he found he was getting worse again. Again, there seems to be no adequate punishment for those who do abscond. Section 41 of the Act says that they can be fined £5 or sentenced to undergo one month's hard labour, but these people were all paupers, for the time being at any rate, and I understand that it is not allowed to have Syphilitics in the gaol. I could only threaten them with the penalties of the law, well knowing at the time that the latter could not be carried out.

78. VAN RHYNSDORP.

DR. G. W. YOUNG, DISTRICT SURGEON.

This dorp is nothing more or less than an enlarged farm without any Local Authority other than the Police. But I understand a Village Management Board is in prospect, and this will, of course, materially better the place.

The general health, in my opinion, is good. The sanitation is bad. Still the prevailing diseases are not caused by the bad sanitation.

The prevailing diseases are (*a*) stomach troubles, attributable to the bread and meat diet, hasty meals and bad mastication; (*b*) uterine disease due to unskilled attention at labour, very frequent labours and most abnormally long lactations; (*c*) Phthisis, almost inexplicable in some cases, favoured no doubt by overcrowding, but often affecting only one member in a family; (*d*) chest complaints due to the diurnal and nocturnal variations of temperature.

(*a*) Condition of Water-supply.—The water-supply of the dorp is from wells; in the winter heavy rains make rain-water also available. Water may be had anywhere for the boring—15 to 25 feet—and when reached is permanent. There is always, therefore, sufficient water. The water is good and potable, without colour or smell, slightly brackish to taste, hard, possessing at a rough computation 10 degrees of hardness. Every well is separate, *i.e.*, the water from no two communicates, they are all covered in and pumps sunk, and practically impossible to become in any way contaminated. The absence of a sewerage system is also favourable to the water-supply since the two cannot in any way communicate.

Some few inhabitants store their water in casks and cisterns, but the majority draw it as required.

Altogether, I am of opinion, that nothing more could be done, or is required, to better the water-supply of the dorp.

The fact that no Typhoid has this last year originated in the dorp, although there were many cases during the war, shows the immunity the wells enjoy from contamination.

(*b*) Sewerage and Drainage.—Rough sluits to conduct the water, just clear of the dwellings, are all the place boasts of.

(*c*) Night-soil, etc.—The wet-pan system is in vogue. There is no organised collection or disposal of either night-soil, slop-water, or household refuse. This is one of the first things which I shall bring before the Village Management Board when it is formed. Personally, I have the greatest difficulty in getting my pan emptied, and others suffer from the same inconvenience.

Only one man is at present available, and if, as often happens, he is drunk or unwilling to work, it becomes a difficult matter indeed to get the work done. He disposes of it by carrying it out about 600 yards, and depositing it on the veld. There it dries quickly, and the regular wind every day, no doubt, disperses it over the Karoo here. There is no disease traceable to this practice, but if at any future time dwellings were to be erected, and wells sunk over the site of deposit, the result might be different. On the whole then the collection is inadequate and disposal primitive.

(*d*) Overcrowding.—From a European standpoint nearly every house is overcrowded, but it seems the rule here for from four to eight people to sleep in one room of about 16 feet square by 12 feet high, and indeed for the food to be kept in the same room. This practice prevails among the farmers who are at any rate rich enough to build more accommodation, and among the poorer and more ignorant whites. It seems neither to affect their health nor their morals. All windows are closed, and, if any fresh air gets in by mistake, it is blamed for all the ills that may follow the next month.

(*e*) Slaughter-houses, etc.—The majority buy their own sheep and kill as required. There is one slaughter-house for those who wish to buy in small quantities. It belongs to Mrs. Haupt at the boarding-house, and is excellently kept. On account of the comparatively large number of Jews here it is watched by their minister, and this, no doubt, is for its good.

There are no bakeries or dairies, nor other trades affecting health.

(f) Sale and Storage of Human Food.—Nothing to report.

(g) Keeping of Cattle, etc.—Beyond the fact that pigs stroll anywhere, even into the houses, a matter for the Village Management Board, there is nothing of note.

(h) Location.—There is a small location consisting of less than twenty huts, and which, on the whole, is well kept. The natives deposit all their refuse on the veld, just as the whites do, and have no sanitary arrangements. Still, they are free from Zymotic and other diseases to a remarkable extent. There is no authority over them except the police; no regular rules and regulations which they have to obey.

(i) Cemeteries and Burial Grounds.—The cemetery is a private piece of ground and under the care of no one. Right of access can only be obtained by courtesy of the proprietor. It is in a shocking state. Graves are unrecognisable and overgrown, even those of the wealthier are in all stages of decay and disrepair. I understand that the whole is to be taken over by the Kerkraad, and here again is work for the much-needed Village Management Board.

From a sanitary point of view the cemetery is quite safe, being properly situated as regards dwelling-houses. None of the graves are opened by rains and stress of weather, and it is only on sentimental and artistic grounds that one can object to the place.

The natives and coloured are buried in the veld at a good distance from any habitation.

(k) Nuisances Generally.—A good deal of house refuse is thrown in close proximity to dwelling-houses. Natives in the location obey the calls of nature too close to their huts and other dwellings. Both of these might be remedied. Otherwise there is nothing to complain of.

(l) Hospitals.—There is one building which is used for patients under the Contagious Diseases Act which is hopelessly inadequate, situate immediately in proximity to main dwelling-houses. It consists of two bare rooms. There is no means of even getting warm water there. Luckily the weather is good and the patients can be outside, but what the conditions must be when there are say twenty patients, and the weather is inclement, can be imagined. There is no proper separation of the sexes and only one night-pan available for all. There is not a chair or other convenience, and, if I have to examine a patient sitting (say for his knee reflex), we must go outside altogether, and find the first low wall. It is under the charge of the gaoler, and as far as possible is kept scrupulously clean, but still is a disgrace to the place.

There is one room in the gaol for sick prisoners, and this is quite comfortable. There is a bed and chair, and it is beautifully clean, and can be rendered more or less aseptic if required.

Other hospital accommodation there is none. Last month I had a coloured woman with advanced uterine cancer, sloughing of the bladder and pudenda and dreadful excoriation of the thighs. This woman could afford to pay, that is on pressure she might collect a sovereign, therefore, she was not available for the gaol hospital. She lay in a hut, and all attempts to keep her clean were useless, there being no hot water or utensils. I did not dare even to put a catheter into her bladder. She died speedily in great agony. It is obvious that she might have been made comfortable and her life prolonged if only one decent room and female attendant had been available.

(m) Infectious Diseases.—There has occurred during my tenancy only one case of Enteric Fever in the district, and that in my own house, in a lad from Cape Town. He must have been infected in town. No case

has originated here. Nor has there been one case of Diphtheria, or Small-pox.

Vaccination.—I have only vaccinated three people, prisoners in gaol, with the lymph left by my predecessor; all have been unsuccessful. I have now a supply of fresh lymph. A vaccination tour should be arranged for me as soon as possible. I am sure the majority of infants are unvaccinated in the district, and although there has been no Small-pox, still the introduction of it would be disastrous.

There have been no cases of Plague, or any other epidemics.

79. VICTORIA EAST.

DR. W. E. KELBE, DISTRICT SURGEON.

The health of the village and district has been remarkably good during the past year, but this fact is, I believe, due more to good luck than good management. There was a case of Small-pox in the person of a native boy which occurred in the village, and created a scare, and the United Councils determined to erect an Isolation Hospital, but the matter was dropped when the scare went over. The Town Council passed some good Sanitary Regulations a few years back, but that is as far as they got, as they do not appear to enforce any of them. The urban authority is, I suppose, a necessary evil, but the sooner the Divisional Councils are done away with, or supervised by the Government, the better both for sanitary and other reasons.

(a) to (l) My remarks in the last report for this district hold good for this year with regard to these sections.

(m) There have been practically no epidemics in the district this year. There was a certain number of cases of Small-pox, but the disease was without very much trouble kept within bounds and did not spread.

Nearly all the cases first occurring at the different centres were infected outside the district as will be seen by the returns.

This disease has practically become endemic in this and the adjoining districts, and the method by which it can be rendered inert is by careful vaccination. To procure absolute isolation at once and keep a strict quarantine in large Native Locations would cost a very large sum, and even then would hardly be of any avail, as it is almost impossible to compel the natives to report all the cases.

There is a certain amount of masonry between them, which one cannot get over, and they will not give each other away. Lately the head guard at a quarantine station at Ely managed, after a lot of trouble, to obtain the names of some of those natives who had concealed some cases, and they were brought up before the Magistrate and fined three pounds apiece, a fine quite inadequate to prevent them from doing it again.

With regard to vaccination more should be done to get the natives to attend at the different centres, as there must be hundreds of them who require to be vaccinated. My tour last year was most unsatisfactory simply because no trouble had been taken to make the natives attend.

From the few centres I got information, I think, the vaccination was fairly successful.

80. VICTORIA WEST.

(i) VICTORIA WEST.

DR. THOMAS E. JONES, DISTRICT SURGEON.

(a) The water-supply remains as reported upon last year.

A new supply, estimated at 60,000 gallons per diem, has been tapped three-quarters of a mile from the present spring. A public meeting was held some few months back, and the Municipal Board was authorized to procure expert opinion of an engineer as to the cost of bringing pure water into the village in pipes, and there the matter will probably rest.

(b) Sewerage and Drainage.—Nil.

(c) Night-soil is removed by a Municipal contractor nightly. The bucket system is in vogue and works very satisfactorily.

Slop-water is to some extent removed by the same means, but a separate provision upon the same system should be established. Refuse is removed by a contractor.

(d) Several cases of overcrowding were reported to the Municipality and stringently dealt with. I know of no overcrowding at present.

(e) The system of butchering in the village is absolutely bad.

Each butcher slaughters on his own premises, where there is no means of flushing or of cleansing the kraals, the floors of which are caked with evil smelling blood, etc., and the resort of a myriad of flies. I should like to see the Municipality erecting its own abbatoir outside the village where all slaughtering could be done under proper supervision.

(f) I am not aware of anything undesirable with regard to the sale, storage, and preparation of human food.

(g) But few cattle are kraaled in the village at night, and there is no cause for complaint as to the way they are kept, or nuisance arising therefrom.

There are very few pigs in the village, and they give rise to no nuisance.

Some of the stabling in the village is objectionable, and I have repeatedly reported upon this undesirable condition.

(h) The Native Location, situate across the river, and about a quarter of a mile from the village on the side of the hill, should have a very much more rigid supervision from the Sanitary Inspector to the Municipality, especially with regard to the disposal of refuse and nuisances generally. There has, however, been some improvement in the condition of this location within the last year.

The native tenements in the town are, on the whole, fairly well kept, and with one or two notable exceptions which have been dealt with, there has been no overcrowding as far as is ascertainable. On the whole their sanitary condition has been fair, with the exception of the Rooiblock; however, that has also been remedied, I believe.

There was some overcrowding in one instance in the town amongst the white population. The Municipality dealt with the matter.

(i) Cemeteries are well kept.

(k) The Municipal Council have done much to deal with nuisances as they arise.

The nuisances committed in the immediate vicinity of the Kindergarten School, and the condition of the water-closet provision for the children is appallingly filthy and redolent with stench. I earnestly hope that something will be done without delay to remedy the insanitary state of the vicinity, to stop the filthy practices which produce it, and that better provision will be made for the children's water-closets, and separate urinals.

(l) A small three-roomed cottage upon the outskirts of the village serves as a hospital for the isolation of cases of infectious disease. It is inadequate, and too near inhabited dwellings, owing to the extension of the village in its direction. It is the property of the Municipal Council, who propose pulling it down, and erecting more commodious premises at some little distance from the township.

(m) Eleven cases of Enteric Fever were reported to the Municipal Authority during the year. Whilst the present polluted water-supply exists there is no difficulty in tracing the cause of the disease.

Seven cases of Diphtheria occurred within the Municipality during the year, and were notified. The usual precautions were taken, and the cases isolated. The source of infection was not traced.

Six cases of Small-pox were notified within the Municipality of Victoria West on the 10th January, the probable source of infection being the epidemic at Victoria West Road. The cases were very mild. They were immediately isolated in the lazaretto. The contacts were placed in tents; they were two in number. These, together with suspects, were vaccinated. The outbreak was suppressed, no other cases occurring. The cases were discharged cured on the 25th January.

No cases of Enteric were notified to the Divisional Authority.

Diphtheria.—Nine cases occurred in the location at Victoria Road during January and February, 1903, all being isolated and inoculated. Infected huts were destroyed, as they were very temporary structures of a most primitive kind and very filthy. Contacts were also isolated. There was no mortality.

Diphtheria broke out in the Victoria Road Location on the 8th September, 1902. Thirty-one cases occurred between that date and the 31st December, 1902. Twenty-six of these cases came under serum treatment; twenty-five recovered; one died; five cases did not come under treatment; of these three were moribund when first seen and two seen *post-mortem*.

The effect of the serum supplied by Government was most satisfactory, as I think the record shows, not only in these cases, but in the village cases as well.

Small-pox broke out at the Victoria Road Native Location on the 19th November, 1902. The twenty cases occurring up to 31st December, 1902, were dealt with in my last report. Six cases occurred in January and early part of February, 1903. They were isolated in tents in a manner already reported upon. There was no mortality among these, and the last of the cases was discharged on the 28th February, 1903. They were all supplied with new clothing after being disinfected. The old clothing was cast aside and burnt. The location was destroyed, the shanties being burnt to the ground.

On the 21st of August a case of Small-pox was notified as having occurred at Loxton; four other cases were discovered in the same family on the 22nd August. They were immediately isolated. Three contacts were also isolated and vaccinated.

The cases did well, and in due course, after disinfection, were liberated; no further outbreak occurred. In both outbreaks vaccination showed an extremely potent influence in limiting the number of cases and modifying the severity of the symptoms.

In Victoria West on the 11th January sixty-four persons were vaccinated in the Native Location. Of this number forty-eight were under ten, and sixty were primary vaccinations. The lymph was satisfactory and took in every instance.

No district vaccination has been authorized during the year. There is a very large number of unvaccinated persons in the district and village.

There were 267 births in the district during the year, and 234 deaths, registered as follows:—

Enteric, 5; Dysentery, 2; Gastro Enteritis, 24; Gastritis, 1; Diarrhoea, 4; Small-pox, 2; Cancer, 2; Croup, 5; Diphtheria, 3; Convulsions, 13; Senility, 12; Syphilis, 4; Accident, 3; Phthisis, 13; Premature Birth, 3; Heart Disease, 9; Bronchitis, 8; Strangulated Hernia, 1; Asphyxia, 1; Murder, 1; Puerperal Fever, 5; Exposure, 1; Meningitis, 2; Marasmus, 4; Acute Rheumatism, 1; Cerebral Abscess, 1; Pleurisy, 1; Scorbutus, 1; Apoplexy, 2; Burns, 1; Peritonitis, 1; Appendicitis, 1; Pneumonia, 97.

The mortality from Pneumonia is strikingly high, even though only fifty-six out of the ninety-seven cases were medically certified as having died of the disease. The increase of the death-rate from Phthisis is disquieting; that the disease is on the increase, particularly amongst natives, is undoubted.

(ii) SUB-DISTRICT OF VOSBURG.

DR. GEORGE B. WILKINSON, ADDITIONAL DISTRICT SURGEON.

(a) The water-supply is fairly abundant and comes from a fountain about 400 yards S.S.W. of the village. It is a soft pure water at source, and runs through a furrow to a small dam situated near the village. This dam is not kept clean, and water drawn here is liable to be contaminated.

All the coloured population have to draw their water from this dam, no other source being available.

The white population get their supply from wells, situated in their own erfs, the depth of wells ranging from 14 feet to 30 feet. These waters are mostly hard but pure.

The water for the erfs runs in open furrows by the side of the roads, and water from this source is, of course, polluted.

(b) There are no drains or sewers.

(c) On payment night-soil is collected by the Municipal Authorities' cart and disposed of in a suitable place below and outside the village.

(d) There is no overcrowding, the dwellings are mostly suitable and sanitary.

(e) No sheep, etc., are slaughtered here now.

There is one bakery, it is in a sanitary state.

(f) The shops are kept clean and food is stored in suitable places.

(g) None.

(h) The native population is orderly and fairly clean. They erect huts at their own expense on a site chosen for them; each adult pays 2s. 6d. per month tax.

(i) A new cemetery has been opened to the north of the village on a slight rise. The old ground is no longer used, it is situated on low ground by the river below the site of the village.

(k) There are very few nuisances in the village.

(l) There is no hospital accommodation.

(m) Since my taking over the Additional District Surgeoncy on the 9th September there has been no Enteric Fever or Small-pox.

I have reported eight cases of Diphtheria; three white and five coloured. Most of these cases occurred at two farms outside the village. The three white cases occurred in the village. The source of infection cannot be traced. Two deaths, coloured, occurred, one at each farm.

I have performed no vaccinations here. Three days were publicly advertised, and everyone knew of it, but no one came.

81. VRYBURG.

DR. W. M. NUGENT, DISTRICT SURGEON.

During the past twelve months the health of the prisoners at the Vryburg gaol has been excellent, with the exception of the usual trivial ailments. A few cases of Scurvy were treated, but the disease was contracted before sentence, and quickly improved under the usual antiscorbutic diet, etc.

Scurvy has been prevalent throughout all the Native Stadts, and several cases occurred at the Vryburg Native Location, which supplies the domestic servants, but the majority of patients came from the surrounding small stadts. This epidemic was due to the continuous drought, coupled with the absence of all vegetable diet and extremely scanty milk supply.

Dysenteric Diarrhoea carried off a number of children.

(a) The main water-supply is obtained from a fountain situated at the south-side of the village. It is of good quality and not liable to pollution.

Irrigation for the gardens is supplied by a reservoir, a few miles from the village, and is laid on by an open furrow.

(b) Sewage is carted to a place outside the village.

Drainage is worked by storm furrows.

(c) The dry earth system is in vogue which is very efficient. The night-soil is deposited some distance east of the railway line.

(d) I have not heard of any overcrowding, or dwellings unfit for habitation.

(e) Slaughter-poles, butcheries, and bakeries are kept clean and inspected periodically.

(g) All cattle kraals are carefully supervised, and situated south of all habitations; they are kept in a good sanitary condition.

(h) The Native Location is much improved. It is laid out in streets and the sanitation is good.

(i) The cemetery is placed south of the village, and is not liable to contaminate any water-supply.

(k) Nil.

(l) The Contagious Diseases Hospital has provision for forty patients.

(m) A few cases of Enteric occurred and were of a mild type. The cases, which commenced in June, were probably due to water contamination.

A few cases of Diphtheria were also recorded.

Vaccination.—An extensive tour was carried out amongst the large outlying Native Stadts and proved highly successful.

82. WILLOWMORE.

DR. RICHARD L. D'ARCY, DISTRICT SURGEON.

(a) The water-supply of the village has undergone no change during the past ten years, and remains in the same unsatisfactory condition. During the year a severe drought prevailed, the tanks, from which the drinking supply is usually obtained, were dry, the dams were empty, and the greater part of the white population and all the coloured drank from the surface wells, which are brack and bad. Any scheme to provide a pure and permanent water-supply would involve such a large expenditure

that I fear it is out of the question for a small community; but much might and ought to be done, both by public bodies and private individuals, to collect and store the rain-water. Many thousand gallons run to waste from the roofs of public and private buildings.

(b) Sewerage does not exist. Drainage is natural.

(c) Night-soil is removed once a week by means of the bucket system; it is satisfactory. Slop-water is thrown in the back garden, or out of the bed-room windows. Household refuse is removed by cart once a week.

(d) No complaint.

(e) Slaughtering is done outside the village. Butcheries and bakeries are clean. The milk supply is fairly satisfactory, but the system of sending it out in bottles should be abolished, the bottles are often not clean.

(f) No complaint.

(g) Cattle and swine are kept in backyards, in many cases in close proximity to dwelling-houses.

(h) The collection of native houses at the entrance to the village, known as the Nieuwe Rust, has, I understand, been included in the Municipal area. If so we may hope for some improvement as regards the sanitary condition. I appended a copy of a special report made for the Municipality to my report for 1901, it was a mere waste of time and labour, no notice was taken of it and nothing done. The other locations are fairly respectable.

(i) Satisfactory.

(k) If any flagrant case occurs the Municipality takes action.

(l) There is a lazaretto about a mile from the village, it consists of two small rooms made of galvanized iron, un-lined and with mud floors. It is only used for natives, is intensely hot in summer, equally cold in winter, and generally unsuitable for the purpose. It was put up in an emergency, and is owned by the Municipality. The Contagious Diseases Hospital is in a shanty near the gaol, it is falling to pieces.

(m) Enteric was almost absent during the year, I am aware of only two cases in the village, one was fatal from perforation of the bowels. There may have been more cases in both town and district, but they were not notified to me. I heard of Diphtheria in the district about Swane-poel's Poort, the cases were under the care of a country practitioner, and did not come under my notice, so I am unable to give any information. There were no cases in the village.

Small-pox was first discovered in the village on January 11th, at the Nieuwe Rust, the woman came from Graaff-Reinet, and admitted she had been in a house where the disease was prevalent. The disease spread to two other adults. All the cases were unvaccinated; of twelve contacts, all of whom were children recently vaccinated and re-vaccinated, none contracted the disease, nor did it spread to any other houses in the location. Both cases and contacts were efficiently quarantined. The next outbreak was at the east end of the village, and came from Port Elizabeth; the cases, two in number, were removed to the lazaretto.

The next discovery was on the railway line on April 13th, the boy had been in contact with the case from Port Elizabeth; here we had three cases. Next the disease was discovered at Baakoven, on April 21st; then at Vluitjes, April 23rd; then at Dassiefontein, July 30th; Request, August 3rd; Spitzkop, August 3rd; Klipgat, August 12th. The disease spread from the railway by means of a native, and then to the farms above-named, the inhabitants of which were relatives and friends, the farms being in a circle. The last case was discharged on September 9th. We had in all thirty-seven cases, viz., eight European males, nine European females, eleven Coloured males, and nine Coloured females. Of the Europeans, five were children and sixteen adults; of the Coloured, three were

children and thirteen adults. Thirty-five cases were unvaccinated, and two vaccinated; both the vaccinated cases being European children.

The outbreak in the village was under the control of the Municipality; in the district under the Divisional Council. Isolation was enforced, guards appointed, and every possible means taken to limit and stamp out the disease. It is difficult to prevent its spread, as before the disease is brought to our notice so many have been in actual contact, visiting and sleeping in the houses. I had no fewer than seventy-two direct contacts under surveillance. We had only one death, a coloured infant, really due to complications (Gastro-Enteritis).

With regard to vaccination, the two cases noted as pre-vaccinated had been done several years before. Both cases were slight. Four other cases who had the disease were vaccinated after being in contact.

Vaccination was performed at twenty-one different centres; 1,612 were operated on. The calf-lymph was good, and I am of opinion that 95 per cent. of primaries and 90 per cent. of secondaries were successful. The whole small-pox area was vaccinated practically from farm to farm.

There was no necessity for taking any steps relative to Bubonic Plague.

Measles were epidemic in the village and district during the second half of the year. The type was severe, the mortality among the Coloured people being high from chest troubles.

Scurvy has not been seen since railway construction passed.

Syphilis is gradually dying out of the district.

83. WODEHOUSE.

(i.) WODEHOUSE.

DR. E. R. ROWLAND, DISTRICT SURGEON.

(a) The water-supply for the town has been good, notwithstanding the severe drought we passed through, owing to the water being collected in tanks from the fountains or springs from the mountains and conveyed by pipes therefrom to convenient positions in the town. The supply from the reservoir has been bad, owing to the drought.

(c) The collection of night-soil, slop-water, and other household refuse is carried out by carts, and deposited at a place a good distance from any habitation.

(d) I know of no overcrowded dwelling-houses unfit for habitation.

(e) The butcheries, bakeries, and dairies are kept in a sanitary condition.

(h) The Town Location is under the control of the Municipal Authorities, and is kept in a fairly sanitary state.

(i) The cemetery is in good order.

(l) There is a galvanized iron room which was erected some time ago by the Municipal Authorities for the isolation of Small-pox. It is about 14 feet by 10 feet, and at some distance from the town.

(m) We have had in all twelve cases of Enteric Fever during the year, mostly of a mild type. Nine of these occurred in the village and three in the district.

During the early part of the year there were a few cases of Scarlet Fever, about twenty-five in number in town and district, none of which proved fatal.

Also a few isolated cases of Diphtheria occurred, none of a virulent nature.

(ii.) SUB-DISTRICT OF INDWE.

DR. R. J. LOVE, ACTING ADDITIONAL DISTRICT SURGEON.

(a) Water Supply.—This is pumped from a dam in the Indwe River about three miles from the town to a reservoir situated on the mine hill near the Native Location. This is only a surface reservoir, and from it the water is conducted in a pipe to the top of Tilney-street, where there is a tap which supplies the whole town. A few of the houses have got private leadings from the main pipe, but the majority have not. There is a stand pipe near the Native Location, which supplies it.

The water is variable in quality; in winter it is practically clear, and contains very little inorganic or organic matter, but in summer it is generally muddy and discoloured, due to inorganic matter in suspension. The water is liable to pollution, owing to the large number of Kaffirs living along the banks of the river and in the watershed from which the water drains.

The reservoir is liable to pollution owing to its being so near the location and being uncovered. The main supply of drinking-water, especially in the summer, is obtained from rain-water caught in galvanized iron tanks. This supply is also liable to pollution, owing to the dust blowing on the roofs and gutter-pipes and then being washed into the tanks.

The water-supply is inadequate for the needs of the town, which still continues to grow. During the year the Indwe Company and the Municipality have been trying to come to some satisfactory arrangement about a proper water-supply for the town, but so far without any effect.

At present the Municipality have a drill at work on the Market-square boring for water, but up to the present there has been no indication of water.

(b) Sewerage and Drainage.—There is no proper system of sewerage or drainage in the town; the night-soil is deposited in pails and removed in a properly-covered cart bi-weekly, the slop-water is generally thrown in the yard, from whence it makes its way to the gutters alongside the footpaths and thence drains to the lower end of the town. These gutters along the sides of the streets are not paved, and are often very offensive from the collection of slop-water in them.

At the lower end of the town water collects in great quantity after rain, and remains there until it evaporates or soaks into the ground. A deep gutter is required to drain this water to the Doorn River, which is only a few hundred yards away.

(c) The Collection and Disposal of Night-soil, Slop-water, and Household and Other Refuse.—The night-soil is collected in pails, which are emptied twice a week in a properly-constructed cart, and buried in pits about two miles from the town.

Slop-water is mostly thrown in the yard or gutter near the house. A few of the inhabitants have the slop-water removed three times a week, but even this is not sufficient.

Household and other refuse is removed twice a week, and dumped down near the place where the night-soil is deposited.

(d) Overcrowded Dwellings and Dwellings Unfit for Human Habitation.—A few of the houses belonging to the lower class of Dutch people and some of the coloured people are over-crowded, but there are no houses unfit for human habitation. The Kaffir coffee-houses are sometimes over-crowded at night.

(e) The Management of Slaughter-houses, Butcheries, Bakeries, and Dairies.—At present the animals are slaughtered on the veld, about a

mile and a half from the town, but a properly-constructed slaughter-house is badly needed. Some few of the animals are killed in the butchers' yards in the town, where there are no proper conveniences for such.

The butchers' shops are kept clean.

The bakers' shops are all well managed and kept clean.

There are no proper dairies in the town.

(f) The Keeping of Cattle, Swine, and Other Animals.—The cattle are kept in open kraals, which are rarely cleaned, and hence an offensive smell is often exhaled from these places.

Sheep and pigs are kept in open kraals at the butchers' shops, but nowhere else in town. The cattle and other animals should be kept in properly-constructed stables, which should be cleaned out at regular intervals, so as to minimise the smell as much as possible.

(g) Good Order, Cleanliness, and General Sanitation of the Municipal Native Location.—Good order, as a rule, prevails in the location. Occasionally after a beer-drink there is a fight, but not often. Illicit brandy-selling has almost disappeared.

The sanitation has much improved during the year. The household and other refuse is now carted away and dumped down about a mile from the location. The huts are kept fairly clean. Some of the older ones have been pulled down and better ones built in their place.

(h) Cemetery or Burial Ground.—The cemetery is situated about a mile away from the town, and at a lower level than the town; is well fenced and planted with trees.

(i) Abatement of Nuisances generally.—(1) All slop-water should be emptied daily, and not thrown in the gutters or back-yards; (2) a proper slaughter-house should be constructed, so as to do away with the slaughtering in back-yards; (3) cattle and pigs should be stabled in proper houses, and not in open kraals.

(k) Hospital Accommodation for Infectious Diseases.—There is no proper hospital in the town or district. The Municipality have a brick building on the Commonage, about two miles from town, where cases of Small-pox are sent. The Indwe Company erected a wood-and-iron building some three years ago when Plague was raging. It has been used for Small-pox cases, but for no other purpose.

(l) Presence or Spread of Infectious Disease.—There were no cases of Diphtheria or Small-pox during the year.

There were forty-eight cases of Enteric Fever in the town, seven of which died, five being white people, of whom one was a child and two being coloured, of whom one was a child. The first case occurred in Market-street, on the 20th January; the last case occurred in Xalanga-street, on the 22nd of December; but the majority of the cases occurred in the lower part of the town, especially in Doorn-street. I blamed a fountain in the Doorn River for being the cause of the epidemic in the lower part of the town, as the inhabitants of this part all used this water for drinking purposes. The Municipality, on being notified of this, promptly closed it up. After this the cases got fewer. Some of the cases occurring in this part of the town I put down to direct contagion, there being no possible means of isolating the infected person from the other members of the family. In some of the cases occurring in other parts of the town it was absolutely impossible to trace any source of infection.

The steps taken to suppress the disease were prompt notification, disinfection of the dejecta, and closure of the fountain in the Doorn River. In some of the houses it was impossible to isolate the infected person owing to lack of sleeping accommodation.

Children exposed to infection were not allowed to attend school, but adults were allowed to go about as usual.

A European boy, fourteen years old, had Enteric Fever at a farmhouse four miles from town, which proved fatal in February. There have been no further cases there. No source of infection could be traced.

A native man had Enteric Fever at the Shelter, in January, which proved fatal. This man was ill with it before leaving Cape Town for here.

There were four cases at the Municipal Native Location in October, all of whom died. Two of them were children.

84. WORCESTER.

DR. D. HUGO, DISTRICT SURGEON.

(a) The pollution of the Worcester water-supply is steadily progressive, and the main cause—that is, the increase of the Upper Hex River population—has this year been alarmingly supplemented by the establishment of a Railway Camp of some hundreds of souls on the banks of the Hex River, at Sandhills. The Town Clerk has been energetic in his attempts to have this nuisance removed. At the present moment the camp is broken up; but, if my information is correct, the reason will be found to be due to departmental retrenchment, and not to a consideration of the objection of the Town Council on the score of health. I have belaboured this question so unremittingly year by year that I am somewhat loth to touch the question once more. It is, at any rate, a matter for satisfactory congratulation to be able to record that the Municipality has just secured for the consideration of a considerable sum a six months' option upon certain water rights, which, if acquired eventually, would supply the local wants from an absolutely pure mountain stream. Meantime, however, the objectionable Railway Camp at Sandhills may be re-established at any moment, and it behoves the Local Authorities, on sanitary grounds, to adopt the strongest measures—legal or otherwise—to have such re-establishment of this nuisance promptly stopped.

(b) and (c) The sewerage and drainage of the town are so far no worse than heretofore; but these, and the collection and disposal of night-soil will all, no doubt, be re-organised when the new water scheme, which is in contemplation, is carried out. In that case, not only will the general health of the town be vastly improved, but the inhabitants will find that a great saving will be effected in meeting the cost of removal of night-soil under the projected sewerage scheme, as opposed to the objectionable, filthy, costly, and wasteful system at present in vogue. The ratepayers would be surprised to learn that the present removal system costs £225 per month, exclusive of departmental expenditure, such as renewal of buckets, collection of fees, etc., etc. I am within the mark when I state that the actual cost of this system works out at not a penny less than £3,000 per annum, and the asset for all this sum is, to put it in plain words, nothing more or less than a stink. This expenditure is increasing at the rate of 40 per cent. However, taking the annual expenditure at £3,000, and not the £3,500 which will be reached in the course of a year or two, the ratepayers could raise a loan on debentures at 5 per cent. which would realise the sum of £60,000. In this respect, no better could be done than follow the lead of Wynberg Municipality. Of course, this £60,000 will not be required at once, and it is unlikely that the whole sum will need to be raised in so tight a money market as obtains at pre-

sent. I have suggested raising the loan on debentures, as I presume that the Government will be unable to advance the amount on the Sinking Fund principle for some time to come.

(*d*) Nil.

(*e*) and (*f*) Under the supervision of the Sanitary Inspector. The discovery of a case of Small-pox among the slaughterers of a certain butchery, in the early part of the year, was the cause of much concern among the inhabitants. A few prosecutions and a vigorous inspection did much good in improving the general cleanliness.

(*g*) See previous reports.

(*h*) The above-mentioned epidemic of Small-pox gave an opportunity of thoroughly cleansing the location. In this, I must confess the inhabitants for the most part, encouraged by the Revs. Eich and Leipoldt, heartily supported the efforts of the sanitary officials. Much litter, dirt, and refuse were disposed of, dirty water-courses cleaned up, cottages white-washed inside and out periodically, and, I daresay, as a result, disease has been comparatively less.

(*i*) and (*k*) See previous reports.

(*l*) A small lazaretto—a two-roomed hut, with no other conveniences—exists outside the town. It has never been used, and after my recent experience, is never likely to be.

(*m*) Dysentery and Diphtheria, formerly practically unknown in this district, have come to stay. Dysentery has not been quite so prevalent as during the preceding year or two, but Diphtheria and allied affections of the throat, have been very common. The number of cases notified under this head have been rural five, and urban twenty-eight, but these figures cannot be relied upon. I have seen numbers of cases occurring simultaneously in the same neighbourhood when medical advice had, perhaps, not previously been sought until some patient died of Diphtheria, or was declared to be suffering from that disease. These cases were mild, and were, as a rule, not notified by me as Diphtheria, as I considered the bulk of these to be what I might call, for convenience sake, a “Diphtheritis.” These recovered without special or antitoxin treatment. But in this same locality and often in the same house I have subsequently recognised the disease as true Diphtheria, and treated it by Antitoxin, with excellent results, excepting in so far that paralysis had perhaps supervened later on. Diphtheria of a milder form was probably therefore much more prevalent than what the notifications would lead one to suppose. My colleague, who gave much the greater majority of notifications, took this line. There has throughout the year been a plentiful supply of water in the Hex River, and pollution from the Upper Hex River has, therefore, been considerably diluted. The number of Enteric cases notified for the District are ten, and for the town twenty-six. This must be the lowest record for some years past. An outbreak of Small-pox was first discovered at the Remount on the 4th January. A number of cases, discovered subsequently, were found to have visited “Asvogel Krantz” (a very out-of-the-way “post” on the banks of the Breede River) at about Christmas time. A large gathering had collected there from Over Hex River, Bosjesveld, Goudini, and Worcester. It appears that the family of Vermeulen, the occupier, had the disease at the time. How it got there I have never been able to trace. From time to time it was reported that certain labourers were suffering from suspicious eruptions at various farms. These individuals were ordered in, and generally came into town, and were discovered usually on my inspections made on Sundays, when they would more likely be found at home in the location. The epidemic was, on the whole, such a mild one at the outset that the persons affected, as well as at least one of my colleagues, who persisted to the end to name

it "Aggravated Small-pox," failed to recognise it. Moreover, a fear of being segregated in camps, the stoppage of their earning power, and so forth caused the affected ones and their neighbours to hide information. Hence it came that the first cases of actual contact at Goudini were discovered more than two months after contact, though it was known much earlier that contacts had gone there and to Bosjesveld. I regret that owing to the great amount of clerical work involved in tabulating the Vaccination returns, and owing also to the fact that I had to get on without the use of proper record books, so that I had to collect my information from sundry slips and papers, I have been unable to give a correct account of prevaccinated and unvaccinated. I had no deaths from Small-pox. The success of vaccination in these epidemics has been established beyond all dispute and expectation. In practically all the cases where I failed it was due to my having used old lymph when my fresh supply had run out.

As to cost, exclusive of my own charges, which are still under consideration, the total expenditure will not exceed £100 by much, if at all. This would include the outbreak at Breede River on 29th September, 1903, as also that near Matjesfontein on 15th December, 1903. In this latter case Dr. Kirkman, of Touws River, acted as my substitute. He will submit his charges according to Government Tariff. Here also a considerable saving will have been effected by this arrangement. As it has been my aim throughout to keep down the cost, I consider I have been phenomenally successful in my efforts. I cannot too strongly urge, in dealing with epidemics of this kind, to do away with the stringent segregation regulations of affected ones and contacts. I maintain that a much more effective means of stamping out the epidemic would be to secure the confidence of suspects by assuring them that if they report themselves regularly and submit to an easy surveillance, they would be permitted to follow their occupations. At all times I vaccinated and re-vaccinated contacts of suspects on the spot where these labourers congregate. I had no difficulty latterly in getting my suspects to act as secret agents, and in this manner I was frequently enabled to deal with infected foci. Had I segregated patients, contacts, and suspects, the cost of guarding and feeding would have been enormous, and it will no doubt be conceded that my own labour and duties would have been proportionately less.

85. WYNBERG.

(i) WYNBERG.

DR. H. CLAUDE WRIGHT, DISTRICT SURGEON.

My views on the usual questions of drainage, water-supply, and sanitation in general, as also the condition of burial grounds, have been so frequently expressed, that I need not repeat them, except to state that all the abuses remain, and little, if any improvement has taken place. Retail butcheries are, however, the exception. There has been great improvement in this respect, and the large importation of foreign meat has, perforce, diminished the bad condition of affairs in connection with slaughtering cattle, etc.

(a) The water-supply in Wynberg and Diep River has been considerably increased, and the quality is good; but in Claremont there has been a scarcity, which will, however, be remedied as soon as the reservoirs are completed.

(b) The drainage scheme for Wynberg is progressing rapidly, and the boon conferred on completion will be inestimable. The drainage and other sanitary arrangements for Claremont and Newlands are carried on as well as the circumstances of finance and other difficulties will permit, but they are deplorably deficient.

(d) The most serious question that confronts us at present is the terrible overcrowding of the lower class of the population that exists amongst Indians and the lower class Jews. Overcrowding is an evil even in sanitary and well-conducted establishments; but when it occurs amongst the lowest and filthiest of the earth, it becomes a terror.

(e) and (f) The plague of flies is rapidly increasing. I believe they are contributors to the outbreaks of Enteric Fever in experience. This disease was alarmingly on the increase last year, and more so this current year. One epidemic was clearly traceable to the milk supplied by a certain dairy. The owner was prosecuted. Since then his premises have been improved, but not to the model extent a dairy should be. Other dairies still remain centres for the spread of infection. They are filthy; and even the rudiments of the conditions that should prevail are absent.

My report this year is brief. I find lengthy reports command no heed from the authorities; but if a tithe of the overcrowding danger should be mitigated as the result of my remarks, something towards the remedy of a most dangerous condition of affairs will be attained.

(ii) SUB-DISTRICT OF RONDEBOSCH AND MOWBRAY.

DR. S. B. SYFRET, ADDITIONAL DISTRICT SURGEON.

The health of the District has been fairly good. There has been no serious epidemic, and to a certain extent progress has been made in the drainage, etc., of the Municipalities, but as regards the collection of tin shanties on the Cape Flats, known as West London, no improvement has been made, and the condition of this place is a standing disgrace to our Local Government.

(a) Water-supply.—No increase has been made in the water-supply of this District. The reservoir on the slopes of Table Mountain is not finished, and, I believe, some considerable time will elapse before it is ready for use. The water-supply is undoubtedly insufficient for the Municipalities alone, to say nothing of West London. The supply is not sufficient for watering the roads, the condition of which, especially when a South-Easter is blowing, is almost unbearable. I do not think there is much chance of pollution of the water at its source, but the danger of pollution is in the tanks, and I hope when the supply is sufficient the dribble system will be done away with. There are several wells in use in Mowbray. These ought to be closed as soon as possible.

In West London the supply of water is from shallow wells around which night-soil is as often as not deposited.

(b) Drainage.—In Mowbray good progress has been made with certain large underground drains. These, when completed, will do away with some well-known plague spots in the place, viz., at the Mowbray Railway gates and near Kotze Road. In Rondebosch, too, certain improvements have been made.

Both water and, I am afraid, in many cases, slopwater is allowed to run into the open drains by the sides of the public roads. Very often there is not sufficient fall for the water to run away, and it remains in stagnant pools at the roadside until it is removed by the Municipal Staff. I must say that this evil is much less marked than in former years, owing to many improvements made, especially in Mowbray, but there are certain roads where it is very pronounced.

(e) Stercus.—From the beginning of 1904, no charge will be made in the Mowbray Municipality for the removal of night-soil. This, I think, is a great advance, as the charge formerly made fell very heavily on the poorer people, and was really a tax on cleanliness. In Rondebosch the charge for removals is according to the valuation of the house. In West London, it goes without saying, there is no regular system.

There is nothing to add to my last report regarding the removal of slopwater and kitchen refuse. It is carried out fairly regularly. But, as only one tub for slop-water is allowed for each house, the owners of large houses, especially boarding-houses, have to dispose of it the best way they can.

(e) The inspection of dairies and slaughter-houses is carried on more regularly than it used to be, but I do not think the inspection of dairies is as thorough as it might be. Visits of inspections ought to be made frequently and at different hours of the day.

(m) Infectious Diseases.—There have been no epidemics during the year.

Four cases of Small-pox were notified during the year in Mowbray. Three of them were the last cases of the epidemic which occurred at the latter end of 1902 at the "Exhibition" Cottages. The fourth case occurred during the winter, and was believed to have been contracted in another Municipality.

Enteric.—There has been about the usual number of cases of this disease. All the cases have been isolated ones, and the mode of infection almost impossible to discover.

Diphtheria remains in an endemic form. Eight cases were notified to the Mowbray Municipality. As I have said in previous reports, Government ought to supply medical men with anti-diphtheritic serum for treating the poorer patients suffering from this disease.

Tuberculosis.—Although I have no official figures I feel sure that Tuberculosis is on the increase in this District, especially amongst the coloured people. The Cape Flats is especially full of it. The nearness of the subsoil water to the surface, and the miserable hovels in which the people live, most probably account for its increase in the latter locality. I believe that Tuberculosis has been made a notifiable disease, but I fail to see the use of this measure unless the sufferers are removed from their wretched abodes to some hospital or sanatorium, and thus cease to be a source of infection to their friends and relations who probably share the room, and, in many cases, the bed of the invalid. At present there is no decent hospital to which these people are admitted.

The cure for most of the evils I have described is the formation of one large Municipality including all the Southern suburbs. Until this is accomplished we will have no chance of getting a sufficient water-supply or an efficient drainage scheme. At present the various Municipalities are trying to do their best, but working alone, and with their limited means, they cannot accomplish half of what ought to be done.

There ought to be one medical officer of health for the whole of the suburbs, and one infectious diseases hospital.

West London and neighbouring parts of the Cape Flats ought to be included in this Municipality. At present they are under the rule of the Cape Divisional Council. It seems hopeless to expect any good work from this most useless body.

Another evil which a single Municipality could tackle is the condition of the Liesbeek River. At present it is nothing but an open sewer, and during the summer months the stench it often emits is horrible. It runs through four Municipalities, and so, of course, nothing is done to cleanse it.

I trust and hope that Government will soon take the question of the Local Government of the Peninsula in hand and make it what it ought to be, a healthy place.

NATIVE TERRITORIES.

1. TEMBULAND, TRANSKEI, AND PONDOLAND.

(i) ELLIOT.

DR. M. PURCELL, DISTRICT SURGEON.

(a) There is no change in the water-supply since my previous reports. A Village Management Board is now the Local Authority, instead of the Magistrate as heretofore. If the village increases in size the water-supply, under existing conditions, which I have annually reported on, will, I fear, be found inadequate.

(b) and (c) As before.

(d) There are six houses in the village unfit for human habitation.

(e) There are two butchers' shops. The slaughtering of sheep takes place near the stream in the village, in an unsuitable place.

(f) and (g) As before.

(h) The location is under the control of an Inspector. It is fairly well kept.

(i) As before.

(k) There is no improvement.

(l) None.

(m) There were twelve cases of Typhoid in this District during the year, with two deaths. Of these one was a native, who died on the road-side, after leaving the Indwe Mines. The other death took place in the village in a young adult. With the exception of the native mentioned, all the cases occurred in white people. Of the remaining ten cases, nine were in the village and one in the country. The first broke out in the beginning of January. The source of infection could not be ascertained. The other cases in the village were amongst the poor, the sanitary condition of whose dwellings and immediate surroundings was bad, and those cases I should attribute to overcrowding, contaminated water and poverty. Four cases were in one house, and two in another. The sanitary measures adopted were left in the hands of the District Surgeon, and consisted chiefly of disinfection of the evacuations and houses, and as much general cleanliness as could be carried out under the circumstances attending individual cases. Strict isolation was out of the question, owing to the size of the dwellings. The last case in the village was discharged at the end of July, the case in the country on the 18th November. The District was free from Small-pox during the year.

The only cases of vaccination I can vouch for as successful were those which I vaccinated in the village, as the country cases were not seen after vaccination; but the success of the operation in the latter may be judged by the absence of the disease during the year. With reference to Scurvy, there were two cases in the local gaol; both in old enfeebled prisoners. Three cases from the Public Works Department, in a very advanced state of the disease, were treated in the local gaol hospital.

Scurvy is the disease attacking the boys employed on the Railway Construction Works—Indwe-Maclear Railway. Their food consists almost entirely of mealie meal, and after a few months on that diet they are almost invariably affected with Scurvy.

Pertussis was prevalent in September, October, and November. Many children died from Broncho Pneumonia as a complication. There were some half-dozen cases of Pneumonia, but no epidemic. There was one case of Tetanus, due to a lacerated wound of the hypothenar eminence from a reaping hook. It occurred in a white boy, and proved fatal after three weeks' duration. Six cases of Leprosy were reported. I believe all but two left the District before the necessary but somewhat tedious arrangements for transferring them to a Leper Asylum were completed.

(ii) ELLIOTDALE.

DR. ALBERT DAVID, DISTRICT SURGEON.

(a) The water-supply is good.

(b) to (k) Nil.

(l) There is no hospital accommodation whatever; not even at the gaol.

(m) In the latter half of the year there were a number of cases of Scurvy in the District, and in the month of December a severe outbreak of Dysentery occurred. Four people were certified to be Lepers.

(iii) ENGCOBO.

DR. JOHN W. WEIR, DISTRICT SURGEON.

The health of the District during the year has been very good, the number of deaths registered being 262, or rather less than 5 per 1,000 per annum. Arranged according to age they are: One year and under, 48; 1 year up to 10 years, 68; 10 years up to 25 years, 25; 25 years up to 60 years, 79; 60 years and over, 42.

With the exception of a considerable number of cases of Summer Diarrhoea among children towards the end of the year, there has been no epidemic to take note of. Only one case of Small-pox occurred, and the numbers vaccinated were 74.

It is now time that vaccination tours should be undertaken, and these will be commenced as soon as the necessary authority asked for some months ago be granted. The matters referred to in sections (a) to (l) are in precisely the same position as stated in last year's report. I would especially emphasize the fact that there is no Government provision at the gaol for prisoners or others with infectious diseases. Four lunatics have been certified, one of whom is at present in the gaol waiting for accommodation in the Graham's Town Asylum.

Twenty lepers have been certified, and it is desirable that these be removed to the Asylum. The rainfall for the year as furnished by the gaoler is as follows:—January, 0·78 in.; February, 1·80 in.; March, 6·30 in.; April, 5·19 in.; May, 0·54 in.; June, 0·52 in.; July, 0·10 in.; August, 0·20 in.; September, 0·15 in.; October, 0·45 in.; November, 3·35 in.; December, 0·74 in.; total, 20·17 in.

(iv) MQANDULI.

DR. P. H. WALKER, DISTRICT SURGEON.

(a) to (l) There is nothing special to report. The District remains in *statu quo*. There is no hospital for the reception of infectious or any other cases.

(m) One case of Diphtheria was notified near Elliotdale. No cases of Small-pox have come under my notice. A number of cases of Scurvy occurred in natives returned from Cape Town and Kimberely. In some instances the symptoms only appeared after arrival of the native at his home. Towards the end of the year Dysentery was common among young children mostly, and due generally to improper feeding.

Phthisis and Leprosy occur in about the same ratio as heretofore.

Cancer is rare, but certainly is coming more frequently under my notice than in past years.

(v) PORT ST. JOHNS.

DR. THOMAS QUERNEY, DISTRICT SURGEON.

(a) There is no change in the sources of water-supply—rain water and well water forming our total income in that respect. The rain water is a clear pure palatable fluid, save in such tanks as are not closed at the top. In two of these I have found what appeared to be the ova of the *Ascaris Sumbricoides* at a time that members of the household using the water were affected by the worm. Taken as a whole the rain water is eminently suitable for all domestic purposes, where it is stored in closed tanks.

There were in the village some five public wells, one of which in Westgate Street was advisedly closed and filled up early in the year. Of the remaining four one is completely overgrown by bush and is not used. Appended are analyses of the remaining three well waters, No. 1 being in constant daily use for baking and domestic purposes, while No. 2 and 3 from the appearance of their surroundings and the character of the water, have evidently fallen into disuse. All three wells lie within a hundred yards of high water mark, close to the foreshore, and, as may be expected, give a water that shows a considerable degree of temporary hardness; all three lie in sandy soil, in surroundings covered more or less by bush, and, in the case of Nos. 1 and 2 having dwellings in close proximity; No. 1 is the only one covered in. As will be seen from the analyses, Nos. 2 and 3 cannot in any way be considered fit to use for any purposes; they should be filled in and closed as soon as possible. No. 1 has been formed by sinking a series of endless barrels end to end until the requisite depth has been reached, the topmost one carrying a small framework that holds the wooden lid in position. It is mostly used by coloured persons, who take their own buckets and ropes, which cannot in many cases be said to be free from pathogenic organisms. From the hygienic standpoint this water cannot be considered suitable for use in a public bakehouse as is the case at present, nor for domestic purposes, as the use of numerous buckets is a constant source of danger. The water is, at present, of very doubtful purity, while the sides of the well itself are the habitat of various forms of fungi that are easily detached by a passing bucket, and are thus liable to distribution in various directions. In the present state of the village, while the coloured classes and others stool in the bush, while there is neither a sewage nor drainage scheme, the well water for internal use is not a desideratum. During the dry season—winter—when the supply of tank water becomes exhausted, well water is used more extensively, and may possibly be the cause of much of the Gastric Catarrh that prevails.

(b) There is no system of sewerage in use here. Drainage is not in any advanced state as yet, such drains as exist being of a primitive nature, and liable to extinction from both storm water and overgrowth of weeds. In the absence of any local authority all the labour that can be obtained for this purpose is derived from such few prisoners as from time to time come to

hand, and, though the best is done with the material we have, spasmodic work of this kind is unable to cope with the requirements of the village. Generally speaking, the roads lie on a level higher than that of the surrounding land, with the result that surface water accumulates and lies on many of the erven, and, through the height of the roads, is difficult to remove by means of the open drain that is in use here. Several of these collections of water have already been reported upon, and steps are being taken by the owners to remove the nuisance. Such drains as we have open into the small stream that winds through the village, and thence into the sea, but, owing to the low-lying nature of the land—practically at sea level—drainage is very inefficient.

(c) The bucket system is in general use for night-soil, a house to house collection taking place about once a week—oftener at the hotels. In summer weather the buckets should be emptied at least twice a week, seeing how favourable atmospheric conditions are here, with so much heat and moisture for putrefactive changes. The night-soil is carried to the beach, and buried in the sand of the shore. Slopwater is, in many instances, poured into a hole in the ground dug for the purpose, a little disinfectant being used on each occasion, though where the bush is close at hand there is a tendency to get rid of the slopwater by the method that causes least trouble, viz., throwing it out into the bush. The same may be said of household refuse. Very few residents bury their refuse, though their servants may be ordered to do so. In looking over unoccupied erven in the village one finds heaps of refuse in all directions, much of it shaded by the bush, but some of it giving off offensive odours after a few days' exposure to the sun. The difficulty of dealing with refuse would be solved if the Contractor for the removal of night-soil would also undertake the removal of household refuse, suitable buckets being provided by the householders for its collection.

(d) None of the dwellings are overcrowded or unfit for human habitation, in accordance with local requirements.

(e) The only slaughter-house lies outside the inhabited portion of the village, and is well conducted, though a little more attention to the quick disposal of blood and refuse would assist in keeping down the flies to a minimum quantity.

The butchery is well conducted and clean, no case of infected meat having occurred at any time during the year.

With regard to the bakeries, there are two, though the use of native labour in the manipulation of food is to be deprecated; both bakers take all possible precautions to ensure the cleanliness of their premises, and the personal cleanliness and good health of their employees.

There are no dairies within the precincts of the village, the supply of milk coming from one or two European farmers in the neighbourhood. A personal inspection of the pails used shows that these dairies are conducted on sound principles, and every effort is made to eliminate all possible causes of contamination. Some milk is brought in by natives in bottles, holding the same cork from day to day, on some of which lactic acid ferment lies so thick, that any attempts at sterilization are futile. It is a matter of no small difficulty to instil into the native mind that milk would carry the better if both bottle and cork were scalded and thoroughly cleaned before introducing fresh milk, and at present the best method of dealing with the native dairyman is to leave his milk severely alone. The native washes his milk bottles in some stream from whose water he may, perhaps, contract Typhoid Fever or Dysentery, and so, through his milk bottle, he may affect the whole community. The case is merely a suppositious one, but there is ample corroborative evidence to support its probability.

(f) Meat unfit for human food was twice found exposed for sale on the public market, in both instances supplied by private individuals.

In the first case, an offensive specimen of "measly" pork was found, the flesh being loaded with "Scolices" in all stages of development. Some of the meat had been sold and removed before the discovery was made, though most of it was recovered and destroyed on my reporting the matter to the Resident Magistrate.

The second case occurred a week later, a portion of mutton being found to contain a cold abscess with well-defined walls the size of a hen's egg. Extensive microscopic preparations revealed nothing beyond the usual fatty detritus and broken pus cells. Neither staphylococcus nor the streptococcus was discoverable. So far as could be ascertained, no other portion of the mutton was affected. Neither of the sellers was prosecuted.

(g) There are no cattle kept in the village, such few sheep and an occasional ox as are required for butchering being kept at the slaughter premises outside. On July 20th a pig was found in a sty belonging to a hut that stands close to the market square. No one was to be found in the house at the time, and on a second visit some two days later, the animal had disappeared.

Generally speaking, horses are badly cared for, particularly with regard to stabling. In the first place, so-called native grooms are not grooms at all, and secondly, the stables are built in a way that shows little or no knowledge of what kind of house a horse needs. The floors of the stables are not built in such a way as to facilitate drainage, the materials used are unsuitable, and the stables themselves seldom or never get flushed out with water. The bedding provided for the horses is in all cases insufficient, and is not renewed as frequently as it should be. Add to this the neglect by the native groom, and one finds little cause for wonder in the old saying here, "That horses don't do well at St. John's." True, the climate is enervating for new comers, and most imported animals require a few months in which to become acclimatized, but a little care, and much cleanliness in the animals' surroundings would go far in abolishing much of the sickness that prevails amongst them.

(h) There are no camps or locations within the ordinary meaning of the word in either the village or district.

(i) The only cemetery lies a short distance from the village, amongst low sandhills covered with scrub, and is sufficiently large for the present requirements of the community. As there is no one to attend to it or keep it in an orderly state, there is at present a considerable growth of grass and weeds on and around the graves.

(k) The disposal of house refuse, and the pools of surface water, are nuisances that remain unchanged, though the latter are shortly to receive attention. Until such time as we have a Municipal Body to compel cleanliness in the matter of house refuse, it will be impossible to keep the village in a sanitary condition.

(l) There is no kind of hospital in the village for the treatment of any kind of disease, not even at the gaol, nor is there any institution of the kind in the District. Fortunately there have so far been no infectious outbreaks, but should any such occur, it is difficult to imagine what the result would be in the present undrained and unwatered condition of the village.

(m) One case of Diphtheria was seen on January 9th in a European infant eighteen months old. The child had been ill for some days before I was called in, and was moribund at my first visit. An injection of 2,000 units of Anti-Diphtheritic serum was given, with the sole result that three fully-grown Ascarides escaped within half an hour from the nostrils, and one from the mouth. The child sank and died the same day, some eight hours after my first visit. The family was quarantined for the usual period, and

father, mother, and four young children—none of whom developed any symptoms. The source of infection was impossible to trace, there being no other case in the village, but the disease was in all probability introduced from the district, though I had no means of ascertaining whether there were any cases amongst the natives. The house in which this child lived is, in wet weather, decidedly insanitary, and it was in the tank-water at this house that one specimen of *Ascaris ova* was discovered. The house is not exactly unfit for human habitation, but requires considerable repair.

On January 25th, a second case was seen, a girl of nine years, of European parentage, who lived almost a mile from No. 1 case. The symptoms were mild throughout; the child was isolated, and complete disinfection maintained from the beginning. Here the serum treatment was also adopted, 8,000 units being given altogether, with the result that the child was practically well on the ninth day. There were no sequelæ. The usual quarantine was observed, at the close of which the premises in both cases were thoroughly disinfected and cleaned. The only connecting link between the two cases lay in the fact that children from both families attended the same school. There were no other cases of Diphtheria in the village, and no source of infection could be traced, my surmise being that both children had been exposed to the same source of contagion, but that in the second case the period of incubation had been prolonged. Scrapings were taken from both patients' soft palates, and cultivations grown on potato, the Klebs-Löffler bacillus being found in more than sufficient quantity to warrant the diagnosis.

On the 7th February, I was instructed by the Resident Magistrate to proceed to Mqakama's Location, some twenty miles from the village and close to the main road to Umtata, to investigate a reported outbreak of "Black Typhus," as it was called by the trader who reported the disease. I found that two weeks previously, about January 24th, two young children and a girl of sixteen years had been suffering from some throat trouble which caused great swelling of the neck, hoarseness, dysphagia, dyspnoea, and high fever, death resulting in the case of one child and the girl. These had been buried some five days previously, and it being summer weather, I did not consider it advisable to exhume the bodies. After the death of the child and girl, other neighbouring children had fallen sick in the same way, and together with the one that had recovered, had been taken across into the Ngqeleni District to see a Witch Doctor. I examined several children at the Kraal—Mabongwana's—where the disease originated, but found nothing. The fact that there was Diphtheria in the village at the time of the outbreak at Mabongwana's leads one to think that the children at that kraal were also suffering from it, and confirms my belief that the source of contagion came to the village from the district.

On August 5th, one case of Small-pox was seen—modified type. A male adult Pondo, living in the Mqanduli District, left his home on August 1st, as he said, quite well, to work on the St. John's-Umtata Main Road. He began to feel ill on the evening of August 1st, was worse on August 2nd, on his arrival at the road party's camp; on the morning of the 3rd, vesicles had developed which were pustular on the head, arms, shoulders, back, and mouth when I saw him on the 5th August. That is the history of the case as stated by the patient. I found him well covered with mixed eruption, partly pustular, partly vesicular, most marked on the forehead, forearms, and back. The temperature was raised to 100·5, pulse 105, full and strong, while there was considerable swelling of the face, neck, hands and arms. He had been isolated on his arrival in a hut half a mile from the roadside that formed part of a kraal, where the two guards that were placed in charge lived. He was supposed to have been vaccinated the previous year by a native policeman in the Mqanduli District, but there was no sign of vaccination marks. He stated that he had not seen this kind of sickness before,

and that it was not present at or about his home, nor had he stopped at any of the kraals on his journey from Mqanduli to the St. John's District. There were no other cases reported either in this district or along his line of march. I am unable to report on the progress of the case, as I received no further instructions in the matter, and consequently did not see the ease again; though I believe he recovered and returned home after a quarantine of some three weeks. The expense incurred by Government—there is no Local Authority—was that caused by my one visit to the sick man, viz., £4 13s.

On March 17th, a report was brought in to the effect that a sickness—apparently Dysentery—had appeared at Headman Nomandi's Location, some twenty-five miles from St. John's, and about three miles from the main road to Umtata. The messenger stated that the sickness appeared about three weeks previously, and was characterised by violent abdominal pain and frequent bloody evacuations. Some nine persons were already dead, and ten were very ill; so far, all that were attacked had died. He also stated that the same sickness was present at that time in the Libode and Ngqeleni Districts, but he did not know of any in the immediate vicinity of Nomandi's kraal. On April 11th, some three weeks later, I was instructed by the Resident Magistrate to proceed to Namandi's Location to investigate the cause of the outbreak. On arrival I found that out of nineteen persons attacked, fifteen had died—eight adults and seven children—none of those attacked having recovered. I visited the four remaining patients, and gave them sufficient medicine to last fourteen days, giving them full directions as to food, water, the disposal of fæces, etc. These four recovered. It was found that most of those attacked had attended a "Beer-drink," the beer being brewed with water from the Umgazi River, that runs close at hand, only a few days before the present outbreak. If, however, the Umgazi water was the source of contagion, one would have expected the greater portion of the location to have been affected, seeing that that water is used by four-fifths of Namandi's people. It is more probable that the disease was introduced from the neighbourhood—either Libode or Ngqeleni—and that some drinking utensil was infected at a hut a quarter of a mile from Nomandi's Kraal, where the first case developed, and from there spread over the location. The disease was undoubtedly Dysentery of an aggravated type, marked by great loss of blood, and death on the third or fourth day. I am of opinion that, had this epidemic been treated at the outset, many lives might have been saved.

Bubonic Plague.—All vessels arriving at Port St. John, and their passengers and crews, from Plague-infected ports, are examined according to Plague regulations. Quarantine is no longer imposed. No infected rodents have been found, either on vessels or ashore, though every house in the village is infested with them, and every store and vessel has its share. So far as I am aware, no kind of organized method of destruction has been, or is ever employed; an occasional rat may be killed in a trap, but nothing more. In case of an outbreak, there are, I believe, at hand tents for the formation of a quarantine camp, but there is no hospital here of any kind, or nursing requisites for the treatment of any cases that might arise. For the past two and a half years I have kept on hand and frequently renewed sufficient plague serum (Institute Pasteur), to inoculate twenty persons, though fortunately, so far, there has been no necessity for its use. Should Plague make its appearance at the Port, the absence of any means of dealing with it would be a factor of considerable potency in helping the disease to spread, and I would suggest that, in order to deal with cases as they arise, a site be chosen for a hospital and quarantine camp, and such requisites as are necessary for its equipment be provided.

There have been no epidemics of either Scourvy or Pneumonia.

EXAMINATION OF A SAMPLE OF DRINKING WATER.

FROM WELL NO. I., PORT ST. JOHN.

Source and Possibility of Contamination.

These are fully dealt with in my report.

Chemical and Physical Examination.

1. Colour in 6-in. Column.—Faint brown.
Turbidity.—Just perceptible.
2. Odour.—None. Much temporary hardness.
3. Residue left on evaporation.—Large white residue which charred to a grey colour, giving off no odour in the process.
4. Free Ammonia.—None.
5. Chlorine.—8 grains per gallon.
Equivalent of Common Salt.—Over 13 grains per gallon.
6. Nitrites.—None.
7. Nitrates.—A visible trace.
8. Hardness.—Great, about 18°. Much Magnesia.
9. Lead.—None.
10. Zinc, Iron and Copper.—Trace of Iron.
11. Oxygen absorbed in 15 min. at 212° F.—Over .30 grain per gallon, the water becoming brown in colour on heating.

Port St. John, Pondoland West.
September 9th, 1903.

From the examination of the source of the water herein referred to, and the results obtained by analysis, I am of opinion that it is unsuited for internal purposes and that its use in a public bakehouse or similar institution should be discontinued.

THOMAS QUERNEY, D.S.

EXAMINATION OF A SAMPLE OF DRINKING WATER.

FROM WELL NO. II., INSIDE THE GOVERNMENT RESERVE, PORT ST. JOHN.

Source and Possibility of Contamination.

Soiled buckets. Well mouth is partly protected by fencing, and is difficult of access by cattle.

Chemical and Physical Examination.

1. Colour in 6-in. Column.—Marked brown.
Turbidity.—Marked and very flocculent.
2. Odour.—Very offensive and suggestive of H₂S.
3. Residue left on evaporation.—Moderate. Charred on further heating to greyish black.
4. Free Ammonia.—More than a trace.
5. Chlorine.—More than 20 grains per gallon.
Equivalent of Common Salt.—More than 33 grains per gallon.

6. Nitrites.—None.
7. Nitrates.—None.
8. Hardness.—More than 29° . Great temporary hardness.
9. Lead.—None.
10. Zinc, Iron and Copper.—More than a trace of iron.
11. Oxygen absorbed in 15 min. at 212° F.—More than 1 grain per gallon.

Port St. John, Pondoland West,
September 17th, 1903.

From the examination of the source of the water herein referred to, and the results obtained by analysis, I am of opinion that it is unsuited for any purpose, and that the well should be closed as soon as possible.

THOMAS QUERNEY, D.S.

EXAMINATION OF A SAMPLE OF DRINKING WATER.

FROM WELL NO.. III., BEYOND THE C.M.R. CAMP, PORT ST. JOHN.

Source and Possibility of Contamination.

Cattle and horse dung, and soiled buckets.

Chemical and Physical Examination.

1. Colour in 6-in. Column.—Yellowish brown.
Turbidity.—Marked flocculent.
2. Odour.—Offensive, suggestive of H_2S Great temporary hardness.
3. Residue left on Evaporation.—Moderate in amount; charred on further heating to brownish black.
4. Free Ammonia.—More than a trace.
5. Chlorine.—18 grains per gallon.
Equivalent of Common Salt.—Nearly 30 grains per gallon.
6. Nitrites.—None.
7. Nitrates.—None.
8. Hardness.—About 29° .
9. Lead.—None.
10. Zinc, Iron and Copper.—More than a trace of iron.
11. Oxygen absorbed in 15 min. at 212° F.—More than 1 grain per gallon.

Port St. John, Pondoland West,
September 11th, 1903.

From the examination of the source of the water herein referred to, and the results obtained by analysis, I am of opinion that it is unsuited for any purpose and should be closed.

THOMAS QUERNEY, D.S.

(vi) ST. MARK'S.

DR. WM. O. R. ARNOT, DISTRICT SURGEON.

(a) The furrow passing through the rapidly-growing village of Cofimvaba and constituting its chief water-supply still remains unflagged and unprotected from the inroads of all sorts of animals, *e.g.*, pigs, cattle, sheep, horses, and dogs. This is decidedly a menace to the health of the village, and as it could be rectified at a small cost, I would strongly urge that it be done at once.

(c) A few of the houses have pails for night-soil, and these are emptied once a week by prisoners; the rest of the houses, including both the hotels, have the ordinary dug-out privies, which should certainly be done away with, as being a likely source of Typhoid Fever and Diphtheria in time to come.

(d) There are two or three so-called native coffee shops in the very centre of the village; these appear to be insanitary, badly lit, indifferently ventilated, and often overcrowded; they are also likely to prove centres for the spread of any infectious disease that a travelling native may bring in with him.

(e) These all appear to be well managed.

(f) Also satisfactory.

(g) There are two cattle kraals in the village, and this should not be allowed; the one is the "skit," or pound kraal, which is in the very centre of the village, is close to three dwelling houses, and only a few feet above the water-furrow; this certainly should be put a stop to, especially as the stock is stray stock, often in low condition, and very likely to be diseased in many ways.

(h) Satisfactory.

(i) There are two cemeteries in the district, and both are well situated and well attended to.

(k) Nil, except the coffee-shops and kraals above referred to.

(l) Nil.

(m) One slight outbreak of Small-pox occurred about the 4th of May. There were only three children affected at a small kraal which was well situated for isolation. The disease was of a mild type, no deaths occurred, and the outbreak was soon and easily suppressed without spreading at all. Isolation of and vaccination in the area of infection was carried out by the District Surgeon under instructions from the Resident Magistrate. The disease had quite died out, and the quarantine was removed by the 20th June. The amount expended in this case was £2 5s.

A rather virulent type of Diphtheria was reported from the Ncora Flats, on August 3rd; all cases were at once visited and briskly treated; there were seven cases in all, one (an infant) having died before report was made; the seven cases occurred at three neighbouring kraals, all of which were quarantined, and unaffected natives given instructions and medicines to prevent infection. The source of the outbreak could not be traced. The disease was successfully suppressed without spreading, and without any more deaths occurring.

No signs of Bubonic Plague, either in human beings or rats, have reached this district at any time.

There has been a good deal of Pneumonia during the year, but not in epidemic form.

Several cases of Scurvy in natives have presented themselves for treatment, and all have been men returning from work in Cape Town, where the natives seem to find great difficulty in getting proper food and chances of cleanliness while out at service.

(vii) UMTATA

DR. ROBERT H. WELSH, DISTRICT SURGEON.

(a) The remarks made in my previous report still apply. The Municipal Council continues to discuss the matter of laying the water, but nothing definite has yet been decided on.

(b) to (e) As in previous reports.

(f) No defects under this heading have been brought to my notice.

(g) As before.

(h) There still continues to be only one native location within the Municipality, and no material change has taken place.

(i) and (k) As before.

(l) No hospital exists in the district for the isolation or treatment of cases of infectious diseases. This is certainly a grave defect, and one that should be dealt with.

(m) There has been no Small-pox or Diphtheria during the past year. One case of Enteric Fever occurred in the early part of the year, the patient being a female European child. The source of infection could not be traced, and the case terminated fatally. In the latter part of the year, three more cases occurred amongst European children. In each of these cases the disease was clearly contracted away from the place. Two of these were in one family, and one child arrived here ill after being in Natal for about six months.

The other took ill a few days later.

In the third case, the child had been away in the Colony for some weeks, and showed symptoms of being ill about ten days after returning here. All three cases recovered, and the disease did not spread.

I know of no other cases. In dealing with these cases no expense was incurred by Government or the Local Authority.

There have been no cases of Bubonic Plague, and as far as I am aware no precautionary measures have been taken for keeping it out. Rats abound in the place, but no steps have been taken by any public body for their extermination.

Epidemic Pneumonia has not been more than usually prevalent. There have been several cases of Scurvy, chiefly amongst prisoners. The exciting causes are close confinement, and monotony in mode of life and diet.

The general health of the district has been good.

(viii.) XALANGA.

DR. P. L. CRAISTER, DISTRICT SURGEON.

There has been, during this year, immunity from Small-pox, Diphtheria, and Scarlatina. We have had an epidemic—I might safely say, “another endemic”—attack of Typhoid, with some deaths. As these cases were among the coloured population, no details are to be got at. During the year there have been a good many cases of pure Pneumonia, which almost amounted to an epidemic, the cases being severe, and some terminating fatally. While on this subject, I beg to earnestly draw the attention of the Authorities, civil and medical, to the very large increase of the cases of Tuberculosis. Not only tubercle of the lung, but also of the mesentery and abdomen, chiefly or almost entirely among natives. Cases come to me from distant parts, on the verge of death, undetected, which, on *post mortem*, disclose diseased tuberculous tissue from “head to foot,” literally to the urinary organs—and this is rapidly increasing. The introduction of

Consumption amongst us in a promiscuous fashion from far-off lands may be blameable, and also the utter ignorance of the native. A girl came to me a few days ago, wearing, of course, her usual clothes, and also, when the temperature outside was 110 degrees, wearing a thick woollen cloak and a shawl on top. She would walk home in the heat, and at her cold hut throw off the lot, and get chilled, as their huts are purposely cold. Their so-called "electional square houses" are in most cases badly built, being an attempt to ape the European, but leaking like sieves on a rain coming, and quite impossible of even partial ventilation. Unless our Government and its energetic Medical Officer look to it, Tuberculosis in its varied forms will decimate the native population, as did Measles in Fiji. This is unfortunately true, and I do not here refer to the lower class native, but to the advanced, respectable Kafir and his progeny. As I write this report comes another case; a young lad of seventeen years of age, hereditary, one-third of right lung gone, apex of left solid, enlarged glands, etc. Tubercle bacilli are doing mischief among our natives, and the reports of my *post mortems* will abundantly confirm this opinion. I am no longer young and given to flights of fancy, and I speak of what I saw as a missionary doctor twenty-five years ago, and of what I see now before my eyes. Surely our Education Department could follow the good example of "Uncle Sam," and introduce a course of elementary instruction in the rules of Hygiene, both for white and black. Such educating would benefit the public health and the individual more than crude notions of drawing, painting and singing. I am sorry that I could not attend the Medical Congress at Cape Town or Grahamstown, as I should there have ventilated this subject.

There have been no vaccination tours this year, as there has not been any Small-pox.

The Contagious Diseases Prevention Act is not in force in the district.

No fresh cases of Leprosy were discovered.

Three out-door paupers are on the list, one an old seaman about ninety years, the second an old woman unable to work from Rheumatism, and the third a man of middle age, a confirmed invalid, quite incapacitated at present. The latter case would be best removed to a hospital or home for such, but he refuses to go, as he has a very large family, and a wife often ill from Cancer of old standing.

(a) Water-supply is excellent at its source, being pure and clear, but on delivery is unfit for human consumption, it having been analysed and certified to be so.

(b) Nil.

(c) Night-soil is carried away by the bucket system in an efficient manner; slop-water and refuse are disposed of in any way.

(d), (e), and (f) No inspections are made.

(g) Cattle and swine are kept in kraals and sties in the town.

(h) There is no location.

(i) and (k) No inspection is made.

(l) An iron house is used to accommodate Small-pox cases only, and belongs to the Town Council.

(m) A case of Scarlatina occurred in town in a European child, being mild in form, and was isolated under the instruction of the Town Council. There has been Typhoid among the natives in the district. The patients were cared for by their friends. No cases occurred in the township.

A somewhat unusual case of Ptomaine poisoning occurred here in a Dutch family, from eating of a tin of herrings given to them by their employer. These herrings had been kept overnight, this night being hot, sultry, and damp. They had been eaten, when fresh, safely enough, but after having been kept as stated, the "microbes" had done their work. These herrings were eaten uncooked; all seven persons had more or less

poisoning; the father, who had eaten most, and a young child, were very bad. Quinine was given to them, and all were out of danger by bedtime.

(ix) BUTTERWORTH.

DR. C. P. BLIGH WALL, DISTRICT SURGEON.

In consequence of the Public Health Act not being in force in this village, or district, it is not possible to make a full report.

There is no Municipality or Village Management Board in Butterworth, but a Municipality has been applied for, and it is hoped that when this is granted, some regular system of sanitation may be adopted.

(a) Water-supply.—(1) Butterworth Gaol.—The water-supply here depends upon two 400-gallon rainwater tanks. In the winter, when these run dry, water is fetched up from the river by the prisoners. The river water is usually stagnant during these months, and the banks are habitually used as a latrine by all the natives in the village.

There are no baths or bath-rooms in the gaol.

Recommendations for improvement:—

- I. The provision of suitable Pasteur or Berkefeld filters, and a regulation requiring all drinking-water to be passed through the filter before use.
- II. The annual cleaning out and cement-washing of all rain-water tanks.
- III. The erection of rainwater tanks of sufficient capacity to provide a minimum of seven gallons per diem for each prisoner and prison guard for a period of at least ninety days. The average number of inhabitants is twelve, and therefore on this basis a capacity of 7,560 gallons would be required.
- IV. The erection of a bath-room.

2. The water-supply at Butterworth Hospital is also dependent entirely upon rain-water tanks, and is inadequate. The Board, through lack of funds, are unable to make any improvement. The erection of a windmill pump, large tank, and Pasteur-pressure filter would solve the difficulty.

3. The water-supply of the village is also from rain-water tanks, supplemented by river water. It is hoped that the Municipality, when granted, may be able to provide a satisfactory water scheme.

(b) There is no system of sewerage or drainage.

(c) Night-soil, in the majority of cases, is removed by a Sanitary Contractor, and deposited several miles from the village.

Slop-water, household and other refuse, is usually deposited in heaps at the outskirts of the village.

It is hoped that the Municipality may also be able to deal with this matter.

(e) Methods of management are unknown, beyond that animals are slaughtered in the village.

(g) Cattle, swine, and other animals are kept in the village.

(h) Native locations throughout the district appear to be in good order.

(i) The European cemetery is well enough situated, but lacks a governing body. There once was a Burial Board who looked after it, and had the ground fenced in, but this Board has lapsed, and the fence and cemetery generally are in a state of disrepair.

The formation of a new Board is required to attend to this, and to see to the proper drainage of certain parts of the ground, to order the arrangement of the graves, and to prevent overcrowding of the graves in any one particular spot.

(*k*) The presence of Kafir coffee-shops, built of wood and iron, and in most cases not provided with proper sanitary conveniences, and subject to no regular supervision, is probably prejudicial to the health of the community.

(*l*) There is no hospital accommodation for the isolation and treatment of cases of infectious disease. In view of the growth of population in Butterworth, and the further increase anticipated on the advent of the railway, such a hospital is urgently needed. In addition to the 400 Europeans at present in the village, there is a large High School, and in the case of an outbreak, there is not even a vacant house that could be turned into an extemporary hospital.

(*m*) During the past year there have been a few cases of Enteric Fever amongst the natives, and none reported amongst the Europeans. One European case of Diphtheria occurred in the beginning of November on one of the farms in the district, but made a good recovery and there have been no further cases. The source of infection is unknown.

No cases of Small-pox have been reported during the year.

In each case where isolation or surveillance has been required, all necessary precautions were taken by the Resident Magistrate. No case of Plague has yet occurred in this district. Rats are numerous in the village, but no special attack upon them has been thought necessary. A sharp look-out for any special mortality among them has been maintained. There is a continued steady increase in the prevalence of Pulmonary and other forms of Tuberculosis amongst the natives, due to their habit of expectorating promiscuously in their huts, and the impossibility of disinfecting a hut in which a consumptive patient has died.

A large number of natives returned from work in various parts of the Colony, suffering from Scurvy; about sixty such cases were treated in the Butterworth Hospital, and many more privately.

(*x*) IDUTYWA.

DR. C. ARMSTRONG LUMLEY, DISTRICT SURGEON.

(*a*) The condition of the water-supply remains as reported for the last nine years; any uncomplimentary remarks applied to it during that time may be taken as holding good at this date.

(*b*) Sewerage and drainage do not exist.

(*c*) The collection and disposal of night-soil, slop-water, and household and other refuse are left to the discretion of the householder. Those most ambitious in the matter take their refuse and deposit it near the fence of the householder, who has his plot on the outskirts of the village.

(*d*) Do not exist to my knowledge.

(*e*) and (*f*) Under no supervision.

(*g*) No regulations exist to prevent the keeping of cattle, swine, and other animals as near one's own or neighbour's house as convenience may dictate.

(*h*) Does not apply to this district.

(*i*) The local cemetery is at a suitable distance, and convenient for all requirements.

(*k*) The most prominent nuisances, such as polluted water, and the cattle and swine kept within the village, remain unabated.

(*l*) No hospital accommodation exists in the district.

(*m*) There has been no Enteric, Diphtheria, or Small-pox in the district this year, though the amount of sickness has certainly not been less than usual. The early months of the year—January, February, March, and April, were marked by an unusual prevalence of Diarrhoea and Dysentery, especially among the children. In the month of February, when it

was especially bad, I found that no less than one-third of the total cases presenting themselves for treatment were suffering from either Diarrhoea or Dysentery. Owing to the customs and habits of the natives, it is impossible to give even an approximate idea of the results of such cases. During the same months Whooping Cough was very prevalent, and I am of opinion that this is responsible for a large mortality, since the native is totally ignorant in all matters connected with the nursing of sick people.

As the seasons change, and summer merges into winter, diseases of the alimentary tract give place to those of the respiratory system, and diseases of the lungs in all degrees of severity become the rule. Again, one is unable to give approximate figures in regard to mortality; but from inquiries I have made among intelligent Europeans who have been brought up among natives, and the results of questions put to parents, as to the number of surviving children in what were originally large families, I am of opinion that infantile and childish disorders, such as I have been mentioning, together with others, are responsible for a mortality of about fifty per cent. of the native children born in such a district as this.

As regards vaccination, I made a start on the district in the beginning of June, but owing to the cold weather, the natives would not turn out in satisfactory numbers, and I had to postpone operations till a more favourable opportunity.

I think as soon as the weeding is over will be the most suitable time to get large numbers together.

I have come across a few cases of enlargement of the cervical glands in men of mature years, in each of which a history of inoculation for Plague in one of the ports was obtainable.

The onset of the enlargement was dated by the patient from the inoculation, and generally subsided satisfactorily under a course of iron and arsenic.

I give the fact for what it is worth, without offering any explanation.

This is the only experience I have had in connection with Bubonic Plague.

I am pleased to be able to render a Nil return in connection with sickness in the gaol, and although Scurvy had been as prevalent as usual in the district, yet not a single case has occurred in the gaol.

It is interesting to note in connection with this fact, and bearing, perhaps, rather strongly on it, that the prisoners get a regular ration of whatever green vegetables may be obtainable from the gaol garden.

(xi) KENTANI.

DR. W. GIRDWOOD, DISTRICT SURGEON.

In regard to sanitation generally in this district, there is nothing fresh to report, and what I had to say in respect to it in my last annual report under headings (a) to (k) inclusive, may be taken as representing the state of matters at present existing.

(l) No hospital exists as yet in this district, either general or for isolation of infectious diseases. The need of such an institution is recognised by both natives and Europeans alike, but up to the present every effort made in that direction has met with failure.

An isolation hospital in connection with the gaol is also required. Should an infectious case arise, there is absolutely no means on hand to isolate and treat such a case.

(m) Two cases of Enteric Fever have come under my notice during the past year, and occurred in one native family, and were probably due to contaminated water.

The district has been free from an epidemic of Small-pox during the year, no cases having been reported.

General vaccination of this district was, however, last made towards the latter part of 1899 by a lay vaccinator, and in a special report furnished at the time, I pointed out that vaccination had fallen short of the requirements of the district in that only 40 per cent. of the total population had been vaccinated. In my last annual report, I again dealt with this subject, and drew attention to the danger of allowing such a period to elapse without taking some steps towards safeguarding the public from this disease.

Another year has passed, and nothing further has been done in this matter, and although Small-pox has, fortunately, not re-appeared in this district during the past twelve months, the conditions are ripe for an extensive epidemic once the infection is introduced. Then it will be almost impossible to successfully suppress the outbreak of the disease.

Nine Lepers have been certified during the course of the year.

Scurvy is still prevalent amongst the natives returning from work, more especially from Cape Town.

(xii) NQAMAKWE.

DR. JOHN STRUTHERS, DISTRICT SURGEON.

(a) The water-supply is adequate for the wants of the village but no system of conserving the supply exists. Consequently it largely runs to waste in an open water-furrow polluted to such an extent as to be wholly unfit for domestic use.

(b) None exists.

(c) The privy system is that generally in use. Refuse is deposited outside the village.

(d) None exist.

(e) These are well kept, and without fault.

(f) Highly satisfactory wherein the public are concerned.

(g) Very few are kept within the village, and these in a sanitary manner.

(h) None exist.

(i) A new cemetery has been surveyed recently, in a most approved site.

(k) No nuisances exist.

(l) No hospital, public or private, exists. The want is felt greatly for cases of serious illness amongst natives.

(m) Infectious disease has been almost absent from the district during the past year.

Epidemics of children's diseases have been prevalent, Whooping Cough, Measles, and Acute Diarrhoea. Many cases of Scurvy from the labour centres, especially Port Eliabeth and Cape Town, have been treated; many of such cases proved fatal from want of attendance and treatment. Tubercular disease is spreading. Leprosy seems nearly extinct; only a few doubtful cases are now on the register.

The district has been systematically vaccinated during the year by laymen under the supervision of the Resident Magistrate, and only one case of Small-pox has been treated during the entire year.

(xiii) TSOMO.

DR. ROBERT YOUNG, DISTRICT SURGEON.

The general health of this district has, on the whole, been good during the past twelve months, no epidemics of a serious character having appeared in that time. Only one undoubted case of Typhoid Fever was

treated in an European, who contracted the disease at East London. Small-pox has been conspicuous by its absence. A successful vaccination tour of the district was carried out during the months of September, October, and November, the native people turning out in large numbers to avail themselves of this protection.

As regards the subjects contained under the headings (a) to (l), there is little or nothing to be added to the reports of former years.

The only point calling for special comment is the extraordinary number of cases of Consumption amongst the native population. This disease has been prevalent in the Native Territories for many years, but never to such an extent as is now the case. Not only is there a vast importation from all the labour centres almost daily, but we now have the disease firmly established locally, many cases occurring and rapidly proceeding to a fatal termination in natives who have never been away from home. In undoubted cases of Phthisis Pulmonalis, the percentages of recoveries are very small, the native displaying in this, as in all other forms of internal disease, a peculiar want of resisting power, even under the most approved treatment, whilst at the same time he is capable of recovering from almost incredible surgical injuries.

Several fresh cases of Leprosy were examined and certified to during the year.

There has been no outbreak of Bubonic Plague, and no precautionary measures of any kind have so far been adopted.

(xiv) WILLOWVALE.

DR. A. LANG KNAPMAN, DISTRICT SURGEON.

Under the headings (a) to (k) inclusive I have nothing to add, and my previous yearly reports may be taken as representing the present existing state of affairs.

(l) There is no hospital accommodation, and consequently no means of isolating infectious cases. In outbreaks amongst natives, the mode of procedure is quarantining, and isolation at their kraals, a most unsatisfactory arrangement. The health of the district during the past year has, on the whole, been fairly satisfactory. During the first three months of the year, coincident with the prolonged drought, a severe epidemic of Dysentery occurred among both Europeans and natives. The mortality amongst native children was very high, and a large number of adult natives also succumbed. With a great number of natives, the question of diet was a very serious matter rendering chances of recovery very remote. The cases which came under my notice were undoubtedly Dysentery, yet I was inclined to believe that Enteric Fever was also prevalent.

Influenza of a severe form, characterized by pulmonary complications and marked cerebral disturbances in the early stage, was also noted. So also, Whooping Cough with its attendant sequelæ.

Several cases of Scurvy came under my notice, chiefly among natives returning from work, their condition improved with the usual treatment.

One case of modified Small-pox occurred in a male native who had not been vaccinated since childhood. He was supposed to have contracted the disease from a child at Fort Beaufort, who was said to have suffered from a similar condition.

The usual regulations were enforced, viz., quarantining and vaccination in the infected area. No other cases occurred.

General vaccination of the district was carried out about eighteen months ago, with the result that it has been comparatively free of Small-

pox. Still, in a purely native district such as this, there must be a large number of unvaccinated children, and too long a time should not be allowed to elapse before it be again carried out.

A deplorable fact to have to chronicle is the number of natives suffering from pulmonary tubercle, and I think there can be no doubt that Phthisis is increasing to an alarming extent amongst the native population. It is not difficult to realise this increase of the disease, when their habits, customs and manners are taken into consideration.

Endeavour to obtain a Phthisical patient to divert himself ever so slightly from his ordinary routine of life by some simple hygiene rules for guidance in his condition; the result, I venture to think, will be most disastrous, for it is their custom, if they cannot obtain immediate relief, to tramp the various districts in the hope of a miraculous cure and finally wind up by returning to the kraal and their first medical attendant, viz., the Kafir doctor.

In a few cases of educated or school natives I was fortunate in persuading them to carry out some simple hygienic rules and to report themselves from time to time, and was agreeably surprised to find that even in advanced cases their general condition greatly improved. These cases were quite exceptions to the rule.

Four Lepers (males) and one lunatic were examined and reported upon during the year.

(xv) BIZANA.

DR. G. R. THOMPSON, DISTRICT SURGEON.

(a) I have nothing to add to my Report of last year. Nothing has been done to remove sources of pollution mentioned by me for several years; the supply (water-furrow) becomes less and less.

(b) Sewerage.—Each person does as seemeth right in his own eyes. There are no sewers. Drainage follows natural channels and the water furrow.

(c) No system exists. Each does as he thinks fit; the back yard, middens, cesspools and gardens are the principal receptacles.

(d) None inspected.

(e) None inspected.

(f) No inspection made except at gaol.

(g) Universal. No regulations as to distance from private dwellings.

(h) None inspected.

(i) Satisfactorily placed.

(k) Nil.

(l) None exists. The need is clamant.

(m) Nil.

Vaccination was performed throughout the district by myself, and by two lay vaccinators appointed to work independently regarding whose work no details have been given me. I desire to express my utter disapproval of such a plan. Especially do I regret to have to record that the instructions given by me in other years to the lay vaccinators in regard to the technique of the work were not followed. Experience has taught me that the precautions I adopt are necessary amongst these necessarily dirty people (owing to their customs).

I can give no statistics as to the success of the campaign, as it is not compulsory in this Colony, as in others, to inspect the vaccinated persons later.

There have been no epidemics in the district, unless the more than usual prevalence of a severe form of Dysentery (if such it was—I only write from hearsay) in one part of the district were one. No cases came under my notice.

Venereal diseases abound. Twenty cases have been treated under the Act, and there are very many more.

(xvi) FLAGSTAFF.

DR. JOHN CHARLES PALMER, DISTRICT SURGEON.

Having but recently taken up my appointment as District Surgeon I have made a personal investigation of the sanitary condition of the village and district. Directing my attention firstly to

(a) I find the chief water-supply is drawn from a spring about one mile from the centre of the village, the water being conducted by a furrow, roughly, from north to south, through the lower western side of the village. This system entails the water being contaminated in its course by the sheep, oxen, etc., grazing on the commonage, there being also a bridle-path over and through the furrow. I should recommend periodical attention being given to the furrow being cleaned out, especially at the points most liable to pollution. However, with a sufficient rainfall, water for drinking purposes can readily be stored in tanks which are mostly in use. Water taken from the furrow should in all cases be previously boiled if used for drinking purposes. I understand that frequent attention has been drawn, in previous reports, to the condition of this furrow, and the danger of its being allowed to remain in a polluted state.

(b) No system prevails.

(c) These matters are left to the individual householders, and are disposed of in the readiest fashion, by being simply thrown at a varying distance from the house. I should recommend that where possible all refuse should be burned.

(d) None.

(e) The one slaughter-house is isolated from other houses and appears to be sufficiently sanitary for the purpose.

(f) No remarks called for.

(g) There being abundant room on the commonage, and the kraals away from the houses, no insanitary inconvenience arises from this source.

(h) There being no local sanitary authority, the small location in the near neighbourhood is in a good situation and well conducted.

(i) In a good position and order.

(k) In so small a community sanitary shortcomings are not so liable to give rise to danger, as in more populous places, there being abundance of air and space, and the climatic conditions generally favourable, a good rainfall, and abundance of sunshine.

(l) None exist; nor is any needed.

(m) None have been brought to notice during the past year.

No vaccination has been done during the year. In regard to this, though a large number were stated to be vaccinated about two years ago. I hardly think, from personal observation, that vaccination could have been as efficient, or as general as I would think desirable, amongst such a large native population—about 40,000. I have noticed numbers of children showing either no marks or, in many cases, but a single one.

This is a latent danger, should any one case of Small-pox be introduced into the district.

Speaking generally, the present sanitary condition of the district and the public health is at least as good as obtains in places similarly situated,

and with a like number of inhabitants, the white population—about 200—being unaffected either through climate or sanitary drawbacks.

(xvii) LIBODE.

DR. R. A. BOWEN, DISTRICT SURGEON.

The health of the district has been on the whole very good.

There have been no cases of infectious disease among the inhabitants of the village.

(a) With regard to the water-supply there is great room for improvement. The European inhabitants have to depend solely on the rain supply for their drinking water, as the neighbouring river water is quite unfit for drinking purposes.

Many of the residents are unable to catch the rain in tanks owing to their dwellings being thatched, and there are an insufficient number of tanks attached to the office buildings to ensure a supply through the dry season.

It would be advisable to have one or two wells sunk in the village (and there is reason to believe that water can be found not far from the surface) or to add several new tanks to the Office Buildings, reserving them solely for the use of the Europeans. The tank water-supply of the gaol is also inadequate, and the roof surface is large enough to maintain a supply to three or four extra tanks.

(b) There is no drainage system in the village.

(c) The system of disposal of night-soil, etc., is by means of pits into which all refuse is emptied. This, in my opinion, is the most satisfactory treatment of sewage in a small community. As servants invariably object to emptying the contents of closets into these pits, I would recommend that prisoners (convicts) should be told off weekly for the performance of these very necessary duties.

(d) There is no overcrowding in the European dwellings.

(e) There is one slaughter-house in the village. I have inspected it frequently, and have always found it well kept.

(f) The one bakehouse is kept in a good condition. I have found no cause for complaint in the way articles for human consumption are prepared and stored.

(g) The cattle kraals and stables in the village are kept in good sanitary condition, and are at a sufficient distance from dwelling-houses.

There are very few pigs kept in the neighbourhood, and none in the village at the present time.

(h) The natives of the district are orderly, and their kraals are kept as a rule fairly clean.

(i) Cemeteries.—Nil.

(k) I have had no occasion to make an order for the abatement of any nuisance during the year.

(l) There is no hospital accommodation of any kind in the district.

This is much to be regretted, and, in the event of an outbreak of Infectious Disease, may lead to an increased number of cases. In the gaol sick prisoners have to occupy the same room as the others. I consider a small annexe of three rooms should be built in the Gaol where sick prisoners might be isolated in the event of an outbreak of Infectious Disease in the Gaol.

(m) There have been no cases of Small-pox in the district. A good many natives were vaccinated twelve months ago, but, as the disease is present in the adjoining district, it will be advisable to keep the district free of Small-pox by occasional re-vaccination.

Diphtheria.—Nil.

I investigated one outbreak of Enteric Fever among the natives at Makeline's Location, near Nkanga Mission Station, on the 24th November.

Five kraals were attacked within a radius of about four miles. There were two deaths previous to my visit, and I found eight further cases. The two who died were adults; there were five adults sick and three children. I consider the disease was brought into the location by visitors from a distance. I made a report of the outbreak to the Chief Magistrate, Um-tata, with suggestions as to isolation of the sick and the suppression of the outbreak, but I have had no further instructions in the matter.

The chief danger in an outbreak of this nature is the likelihood of contamination of the water-supply of all the kraals in that neighbourhood, and also of the disease being transmitted to the Europeans in the adjoining Mission Station.

Bubonic Plague.—Nil.

With regard to the above, it is to be feared that should the Plague invade the Native Territories it will be a source of great danger, owing to the extreme difficulty of isolating natives in the uncivilized state, and to their habitual carelessness in reporting an outbreak of illness of any kind. There is no special prevalence of rats in the district.

I have examined and diagnosed four cases of Leprosy during the year in this district, and I understand that there are several more suspected cases which I have not yet seen. There is reason to believe that Leprosy is much more common among the natives than is generally known, and that the disease is spreading; but the natives conceal these cases in every way they can, such is their dread of being removed from their homes. My experience leads me to believe that Leprosy is both hereditary and contagious, and it is of the utmost importance that the sufferers from such a repulsive disease should be segregated from their healthy fellow-creatures.

(xviii) NGQELENI.

DR. J. BLACK, DISTRICT SURGEON.

The general health of the white and native population in the village and outlying districts of Ngqeleni, on the whole has been excellent. There has been no epidemic of any kind, excepting a few isolated cases of Whooping Cough amongst the native children. I have examined six natives for suspected Leprosy and certified them to be suffering from that disease.

I have twice reported on the insanitary condition of the closets of the Court House, Residency, and Gaol; otherwise the sanitary arrangements of the village are satisfactory.

There is no hospital accommodation at all in the district, but fortunately, there has been no need for it during the past year.

(xix) TABANKULU.

DR. W. P. NICOL, DISTRICT SURGEON.

(a) The quantity of water is sufficient for present purposes. The main stream lies below the village, but at no great distance, while the water which is used by the inhabitants is brought from this stream to the higher ground in a furrow about a mile in length. The usual sources of contamination exist.

(b) None.

(c) No remarks.

(d) Below that part of the village inhabited by Europeans is a small settlement of coloured people which, it is needless to remark, is a nuisance from a sanitary or any other point of view.

- (e) Butcheries satisfactory.
- (f) No remarks.
- (g) There is no nuisance to report on this head.
- (h) and (i) None.
- (k) No remarks.
- (l) None.

(m) There have not been any cases of Small-pox during the past twelve months. A general vaccination of the district was recommended by both the District Surgeon and Magistrate, but without any reason being given, was not authorised. I cannot too strongly condemn the way in which the question of vaccination is treated. Vaccination is usually looked upon as a precautionary measure. Its object is to render serious and extensive outbreaks of Small-pox impossible, and it may fairly be claimed for it in the Native Territories that the object has been attained. When, however, Small-pox appeared in a district close by, nothing was done. Certainly there was some correspondence on the subject, not, as might have been expected, on the question of the advisability of a general vaccination, but on a more important one, involving the expenditure of a few pounds. Had the disease broken out, it would have been a much more costly matter for the Government, and much more remunerative to the District Surgeon.

In March there was a rather severe outbreak of Dysentery at a few kraals in Gxididi's Location. Seven people died. In company with the Resident Magistrate I visited the locality. The people concerned did not even take the trouble to send for the medicines which were offered them. No more was heard of the epidemic, except that the sufferers appeared to have found relief from the treatment of a Kafir doctor, who purchased large quantities of blue-stone at a neighbouring store for their benefit. At the beginning of the year there was a considerable number of Lepers in the district, but a large reduction has been effected by the efforts of the Resident Magistrate.

A hunt was organised in July, and seven Lepers were discovered, and their removal authorised and carried out.

As to the general health of the natives, all that has been said in connection with Mount Ayliff applies here. The climatic conditions, and habits of the natives are the same.

(xx) LUSIKISIKI.

DR. OTTO BOLTZE, DISTRICT SURGEON.

The health of the inhabitants of this village and district has been very good during the year, the only death amongst the white population having been that of an infant.

No outbreak of Measles, Small-pox, Typhoid Fever, or any other infectious disease occurred. There was a rumour in September of an outbreak of Amaas (modified form of Small-pox) in a Kafir kraal, but I was not sent out officially to investigate the matter, and the rumour was evidently false.

Status quo ante with regard to water-supply, sewerage and drainage, disposal of nightsoil, overcrowded dwellings, management of slaughter-houses, keeping of cattle, native kraals, cemetery and public nuisances, all of which I have discussed at length in my report of 1901.

The main feature of the year was a tour of examination for Leprosy during the months of August, September, and October, when seventy-four persons were examined, seventy of whom were found to be Lepers. All were Kafirs, and some suffered from the disease in its very worst form. Although this is a fair result of the investigation, I am of opinion that the

search was not a complete one, and that there are a good many more Lepers in the district who, if allowed to stay behind when the others are sent away, will be the cause of spreading the disease again. It would certainly be much better and safer, if all the inhabitants of an infected kraal were medically examined without an exception, and if less confidence were put in the statements of the wily Kafir, who abhors the idea of having to leave his native country.

NOTE.—Upon this subject, the Resident Magistrate makes the following remarks:—"I disagree with the District Surgeon that there are more Lepers in the district. I am of opinion that every Leper has been discovered, as my police were scouring the country for three months looking them up and marking them down before we went out. It is an assertion of the doctor's not borne out by facts. It would be absurd to medically examine all the inhabitants when it is well known who are and who are not Lepers. Leprosy cannot be hidden, however wily the native may be."

2. GRIQUALAND.

(i) KOKSTAD.

DR. ARTHUR J. H. THORNTON, DISTRICT SURGEON.

In my capacity as Borough Medical Officer to the Municipality of Kokstad, I have already made a report dealing with Kokstad alone, and which furnishes information in regard to most of the subjects detailed in Circular No. 59, of the 1st December last; thus, answers to questions (*a*, *b*, *c*, *d*, *e*, *f* and *k*), are dealt with in this report.

(*g*) The Sanitary Inspector has these matters under his supervision.

(*h*) and (*i*) No change since last reported.

(*l*) There is no hospital accommodation for the isolation and treatment of cases of infectious disease. This subject is more fully treated of in the copy of my report above referred to.

(*m*) The year has been specially noticeable for the prevalence of Small-pox in town and district. The first case of this disease was detected at Elsenham, nine miles from Kokstad, on the 20th January, 1903, and it was never definitely ascertained where the infection was contracted, but a second case occurred a few days after at Spion Kop (on the 31st January, 1903), which was probably contracted in Mount Fletcher District. From that date till the 14th November, 1903, the disease ran through the town and district. Altogether there were 107 cases, of which fourteen were Europeans, and the rest coloured. There were, altogether, only five deaths, all coloured.

The total cost in dealing with Small-pox in the district by the Government was £230 6s. 0d., and in the Municipality by the Municipal Council, £520 15s. 10d.

With regard to vaccination, a total number of 2,524 persons were vaccinated during the year, but it is not possible to give accurate returns of success or non-success of insertions, since natives cannot be got to return for verification.

There were no cases of Enteric Fever in the district outside the township.

On the 29th September, a case of Diphtheria was detected at Poort Kraal, the patient being an adult male Kafir, who recovered. The cause of the disease was probably the state of the water-supply of the inhabitants

of the kraal, which was a stream, almost dried up on account of the long drought, at which man and beast alike obtained their drinking water, and which, at the time of my visit, consisted of a series of muddy pools containing green and stagnant water. On the adjoining farm, Puffadder's Hoek, another case was detected on the 11th October, 1903, in the person of a female Kafir about eighteen years of age, who recovered under treatment with Anti-toxin. The condition of the water-supply at this place was similar to above. At each of these places two deaths had previously occurred which, from the description of the symptoms, must have been due to the same disease.

There were no cases of Bubonic Plague in the district, and no special steps have been taken officially to exterminate rats and other rodents.

There were 287 births in the district during the year, and 225 deaths, a table showing causes of latter being attached. It should be noted, however, that in the majority of cases of death in the district, outside the Municipality, the causes of death are not accompanied by a medical certificate, and are, therefore, not really reliable for statistical purposes.

Table showing Causes of Death.

1. Diseases of the Respiratory Tract:—

Phthisis... ..	15
Bronchitis, Acute	4
„ Capillary	2
Pneumonia	46
Pharyngitis, Acute	1
Asthma	3
Croup	2

2. Diseases of the Digestive Organs:—

Gastric Catarrh	1
Gastric Enteritis	12
Tabes Mesenterica	6
Atrophy of Stomach	1
Hepatitis	1

3. Diseases of the Blood and Blood Circulatory Apparatus, and of the Urinary Organs:—

Valvular Disease of Heart	4
Chronic Bright's Disease	7
Anæmia	1
Phlebitis and Embolism	1

4. Diseases due to Specific Organisms:—

Leprosy	2
Meningitis	2
Pertussis... ..	4
Small-pox	5
Dysentery	11
Simple Continued Fever	1
Diphtheria	5
Puerperal Fever	2
Acute Rheumatism	2
Syphilis	2
Erysipelas	1
Scurvy	2
Peritonitis	2
Measles	4
Influenza	17
Enteric Fever	2
Tetanus	1

5. Other Causes of Death:—

Convulsions (originating causes not given)...	20
Accident ...	12
Suicide by Strangulation ...	1
Debility ...	5
Child-birth ...	7
Cancer ...	2
Senile Decay ...	2
Weakness from Birth ...	2
Exposure to Cold ...	2

Report upon the recent Small-pox Epidemic in Kokstad.

To the Mayor and Town Councillors:—

Gentlemen,—Having been requested by you to make a special report upon the recent Small-pox epidemic in Kokstad, I beg herewith to hand you same.

During the latter months of the year 1902, cases of Small-pox appeared in the Mount Currie District, around Kokstad, and on the 31st January, 1903, a case was detected in the Municipality. There were, at this time, two cases in quarantine at the farm Elsenham, and two at Spion Kop, and it was at the latter place that our first case contracted the disease.

On the discovery of this case, the premises occupied by the patient, together with its inhabitants, to the number of eight, were put into quarantine and vaccination performed upon the contacts, with the result that only one other case occurred there; quarantine was finally removed on the 20th February, 1903. On the 7th March, 1903, two further cases were discovered in different premises, and it was not quite clear where they had contracted the disease, but most probably they were cases of re-infection from the surrounding districts. It was then resolved to establish a quarantine lazaretto in the old shed in the Park, for the treatment of coloured and indigent patients. From this time on numerous cases occurred, and it was evident that concealment of cases was being practised by the coloured population, many of the patients being almost convalescent before discovery. In consequence of this, house-to-house visitations were undertaken by the Sanitary Inspector, and all coloured cases were removed to the Park without delay, all contacts vaccinated and kept under observation, and disinfection of the premises carried out.

In July the first European case broke out, and it, and all subsequent ones were quarantined in their own homes, since it was not possible to provide suitable accommodation for them in the Park. The last case was released on the 15th October, 1903, and since that date the town has been free from Small-pox. At the present time the district is also free, so far as is known.

During the whole period, vaccination was performed both by myself, the other medical men of the town, and the Sanitary Inspector, a total number of 745 having been done by me.

The total number of cases treated has been 72, and these were mainly of a mild type, though about one-third were severe, and of these, three died, one being an aged Griqua female who had not been vaccinated since infancy, and the others had not been vaccinated at all.

While the disease was running its course in Kokstad, there were numerous foci in the surrounding district, cases having occurred at Elsenham, Spion Kop, The Willows, Onverwacht, Modderfontein, Assaberg, Kruisfontein, Tiger Hoek, Marais Kop, Bloemfontein, Salzer's Farm, R.

Webster's Farm, Poortkraal, Newmarket, and Mill Grange. In some of these the source of infection could be traced to Kokstad, viz., Onverwacht, Assaberg, Marais Kop, R. Webster's Farm, and Newmarket; and some of them, in turn, may have been a source of re-infection to the town.

In connection with these foci in the district, I have asked the Government to sanction the burning of all huts and clothing capable of spreading infection, some small compensation being made to the owners, but so far, have not had a reply. This measure is really a necessary one, as it is utterly impossible to thoroughly disinfect a Kafir hut.

In conclusion, I think the main lesson to be learned from our recent experiences is the necessity for the construction of an isolation hospital, to which all infectious cases could be removed at once, if necessary, and I am convinced that, had we had such a building at our disposal when the first case of Small-pox appeared in Kokstad, the disease would not have obtained such a firm footing amongst us, but would have been stamped out far earlier, and at much less expense. I am aware that a scheme for providing such an isolation hospital is under consideration, and I trust, ere long, to see a start made in its construction.

I have the honour to be,

Sir,

Your obedient Servant,

ARTHUR J. H. THORNTON,
Borough Medical Officer.

(ii) MACLEAR.

DR. JAMES H. WHITE, DISTRICT SURGEON.

(a) The condition of the water-supply is good, being both abundant and pure.

(b) The drainage of storm-water is still in an unsatisfactory state, but the Village Management Board is taking steps to have it improved.

(c) Night-soil is buried in gardens where a pail system exists. There are still a number of cesspools; slops are for the most part thrown on the ground around the houses.

(d) There are none at present.

(e) Animals are slaughtered in the open at some distance from the butcheries. There are three butcheries, two of which are clean and well-kept. The other is a wooden and thatch building with earth floor, and is not kept in a very clean manner.

(f) This is satisfactory.

(g) Cattle and sheep are kraaled at night, and horses stabled.

(h) The Police Camp is still in its old position. It is not kept so clean as it should be, and is thus a menace to the village.

(i) The burial ground is well supervised.

(k) The town is improving in cleanliness.

(l) No hospital accommodation exists for treatment of cases of infectious disease.

(m) There has been one case of Diphtheria during the past year; no cases of Typhoid have occurred. There has been one outbreak of Small-pox at the farm "Glengarry." Two cases were found, one convalescent and one progressing. Both cases recovered. They had not been previously vaccinated. Vaccination was carried out at once, and no further cases ensued.

Owing to the continued prevalence of Small-pox in a part of the district called Mapassa's Hoek, thorough kraal-to-kraal visitation and vaccination was carried out over the whole of the area. No Small-pox cases were found, but at various kraals cases which had recovered were seen. No report of these had been sent in to the Magistrate.

There are no rats in the district.

(iii) MATATIELE.

DR. C. ERNEST POPE, DISTRICT SURGEON.

(a) The whole of the water-supply for the use of the inhabitants has been, previous to October last, derived from springs and underground rain-water tanks, the stream supplying the town having ceased to run for the last three or four years, excepting after heavy rains. In October last, a deep bore-hole was put down on the market square, which has been the means of providing a large and wholesome supply of water for domestic purposes at a time when the springs were failing.

(b) None.

(c) Night-soil is supposed to be removed and buried at a spot towards the north of the town, but there is no control. The midden heap is the receptacle for the slops and general household refuse. The Municipal Act has been applied for, but not yet put in force. The need of the application of the provisions of this Act dealing with sanitation is becoming more and more felt every day.

(d) Overcrowded dwellings are not so prevalent as in the past, but there are still a few.

(e) Excellent.

(f) Good arrangements are in vogue for this purpose.

(g) Swine are seldom kept. Other animals have suitable arrangements made for their keeping.

(h) None.

(i) Cemeteries are under the control of a Burial Board, which has no funds at present. The old ground is no longer used, and the new ground is managed with every consideration for decency and health.

(k) There is no control, but the people generally are most anxious to follow any directions that may be given to abate any nuisance.

(l) None.

(m) Enteric Fever is always to be found amongst the location natives, but its presence is never reported, and no history of its origin, when discovered, is obtainable. Undoubtedly a considerable number of natives die from this disease every year. There was a small epidemic of Enteric Fever in this township, which started at the end of April, and all cases were traceable to one of the hotels. There were in all four cases, and all recovered. The street at the back of the hotel had been allowed to get into a filthy condition, and had been used for depositing all the stable litter and rubbish from the hotel, and the servants had used the wall bounding the hotel property as a latrine. Three of the cases had resided in rooms within a few yards of this wall, and the fourth, a little girl, and sister of the third case, must have contracted the disease by eating food with the spoon used by her brother, the food having been left in the room for some time. The disease was stamped out by a thorough cleansing of the hotel yard and neighbourhood, by isolation of the patients, and the thorough disinfection of all the excreta and the bedding and rooms occupied by them.

Small-pox appears to have become endemic. It is seldom reported, and very little information is obtainable regarding the source of infection. In all, fifty-nine cases have been discovered during the year. Long after it

had disappeared, I heard that there had been outbreaks that had not been reported, in every part of the district. The number of pock-marked natives to be seen during the last few years is evidence of the extent to which the disease has spread. A few old people and young children died of Small-pox, but generally the disease has been of a mild type. The Resident Magistrate, who is the Local Authority, has done everything possible under the circumstances to stamp out the disease, but the possibilities are small in view of the state of the law, the staff available, and the want of money. The people will not be vaccinated, as they ought to be, and there is no means whereby they can be compelled to be vaccinated. There is no means whereby notification is made compulsory. There is no authority by which contacts can be controlled, and the expense of employing guards is not authorised. The result is that contacts, and even people with the rash out on their bodies are wandering all over the country without control, and no one troubles about it, except when discovered by accident, and then they can only be asked not to do it again.

There was a small outbreak of Epidemic Pneumonia last April, all traceable to the gaoler's quarters. Three of the gaoler's children were ill at the same time, followed by a prisoner who worked for the gaoler, and one case in a child who was a frequent visitor at the same house. After thoroughly cleansing and disinfecting the house the disease disappeared. Its origin is unknown.

I would again draw attention to the prevalence of Phthisis in the district. With Syphilis, it is by far the most prevalent disease amongst the natives, and, with the knowledge I have of the natives, I am certain it is becoming more and more prevalent every year. I consider that these two diseases combined prevent a very large number of natives from going out to work, and I have no doubt that Phthisis alone is accountable for a very large proportion of the deaths in this district. Here again there is no means of obtaining information, and, if obtained, no means of acting upon it. The importance of identifying every case of Phthisis and controlling it is obvious, in view of the present day knowledge of its insidious and infectious nature. The longer the disease is allowed to go uncontrolled, the more people will become infected and the more difficult it becomes to limit its ravages, and, therefore, the more necessary it is that decided action should be taken at once.

(iv) MOUNT AYLIFF.

DR. W. P. NICOL, DISTRICT SURGEON.

(a) In spite of the lateness of the rains, which did not begin until the end of October, the water-supply held out, and has been more than enough for household purposes. At its source the water is pure, but by the time it reaches the houses, in the various furrows in which it runs, it cannot be anything but polluted. Paper, dust, dry refuse, animal and vegetable matter are constantly polluting the stream. There is yet another danger which is a very real and occasionally fatal one. There is a large number of Kafirs and coloured persons always in the village (servants and people attending the Office) who deposit their excrements in various parts of the village, and are thus a constant source of danger to the community. In suggesting remedies, two things must be borne in mind. In the first place the inhabitants do not (except now and then) appear to suffer any ill effects from the water, and, in the second place there is not likely to be any improvement until the public manages its own affairs. In one respect the Government is blameable, in that it insists too strictly on the removal of prisoners. The cleaning of the water furrows, of the streets, and the removal of night-soil in a community so small as

this can only be done by prisoners, and a certain number should always be available. An arrangement to this effect could very easily be made.

(b) None.

(c) Night-soil is in almost all cases removed in tubs and deposited at some distance from the village. Household refuse is burnt, and slopwater distributed on the gardens or the veld.

(d) The great mistake of allowing Kafirs or coloured persons to hold property in the village and live side by side with the Europeans has led to the erection of very unsuitable dwellings. That the European should be compelled to submit to this is both a mistake and an injustice, and will retard progress in sanitation, as in all other matters. It is doubtless a grand ideal to civilize the native, but few people stop to think of the effect of the native on the European.

(e) The only butchery for Europeans is well managed.

(f) No remarks.

(g) There are eight cattle kraals within the area of the village. Under existing circumstances they do not constitute a nuisance.

(h) None.

(i) The cemetery lies in a hollow between the two parts of the village. Its position would be unsuitable were the place to grow to any extent.

(k) and (l) None.

(m) There has not been a single case of Small-pox during the year in spite of the existence of that disease in two neighbouring districts. On its appearance in Kokstad, application was made for a general vaccination, but no reply has as yet been received. It is presumed that this step was considered unnecessary. Chicken-pox made its appearance in the village, and nearly all the European children had it. It did not spread to the Kafirs, although its origin was traced to a case (Kafir) in the the Flagstaff District. The epidemic was a mild one, and no steps were taken to prevent its spread. It may have been of some use in impressing on many sceptical minds that this disease is not the same as Small-pox.

There have not been any cases of Diphtheria or Scarlet Fever. There has been one case of Enteric Fever in a European, a store assistant. How he caught it is not quite clear; but it was probably due to drinking water infected by a Kafir. The case was a mild one. It is noteworthy that there is every year at least one case of this disease among the white people. When, however, we bear in mind that Kafirs suffering from this disease will come to the village on ordinary business and defæcate in any secluded spot, choosing, as a rule, one near to a stream, it is a matter for surprise that there are not more cases.

To speak of the general health of the district is a more difficult matter. As I remarked in my last report diseases of the air-passages and lungs are very common among the natives. Owing to their habits of life and to the climate, the people are exposed to great and sudden changes of temperature. As might be expected, children are the great sufferers. These complaints, coupled with Diarrhoea and Dysentery, account for most of the deaths. In spite of all that may be said to the contrary, the Kafir has very little idea of how to maintain his health, and the mothers are ignorant and obstinate in the bringing up of their children.

There is another disease which is gradually forcing itself more and more upon our notice, and that is Consumption. The pure air and the outdoor life of the native protect him to a large extent, but given a single case in a kraal, others will certainly follow. It is in the hut itself that the danger lies. The consumptive, like all Kafirs, spits freely on the floor of his hut, and in a short time this hut must contain enough spores to overcome the resistance of the hardiest.

At the beginning of July a suspected outbreak of Syphilis at the Rode was investigated. It was found that two persons had suffered from

Soft Chancre and one from Syphilis, which at the time of my visit was no longer active.

Three cases of Leprosy were discovered at one kraal, in Mnikwa's Location. They were all children. None of the parents were affected, nor could any clue to the origin of the disease be obtained.

(v) MOUNT FLETCHER.

DR. M. RICONO, DISTRICT SURGEON.

(a) Water-supply.—The water-boring operations carried out by the Government in this village during the month of November were a success. A hole has been sunk in front of the Court House to the depth of 116 feet, and a splendid supply of water stored over a dyke of dolerite has been tapped. The water rose to about 50 feet from the surface. It is necessary that a second bore-hole should be sunk in the lower part of the town on the Market Square, and the village will be fairly well supplied with good water, as there is every possibility of a good result.

(b) None.

(c) Disposed of at the discretion of the individual residents.

(d) The Gaol is still the principal dwelling overcrowded, and it is very necessary that the new Gaol should be started as soon as possible.

(e) Satisfactory.

(f) Nil.

(g) Cattle are kraaled at night, and herded by day; sometimes, however, cattle or swine may be caught roaming in the township.

(h) Nil.

(i) Satisfactory.

(k) None.

(l) None.

(m) No cases of Diphtheria have occurred.

Two cases of Enteric Fever in Zibi's Location amongst Europeans were discovered in November. Both cases ended fatally, due especially to want of sanitary conditions. No further cases came to my knowledge.

The source of infection was traced to a certain native kraal in the South-western part of the district in Lebenya's Location.

Small-pox.—Three cases of Small-pox were discovered on the 15th of January on the South-eastern part of the district in Lebenya's Location. 639 persons were vaccinated around the infected area with lymph from calves Nos. 3247, 3334, and 3258. Another case of Small-pox was discovered on the 18th September in Lebenya's Location, and the necessary steps were taken for the suppression of the disease.

The total cost incurred in dealing with outbreaks of Small-pox was £10.

It is difficult to guess the success of vaccination, as the people vaccinated were living in the further parts of the district. Old Syphilis is prevalent amongst the Basuto population. There are several cases of non-examined Lepers at large in the district.

During the hot season I observed several cases of Low Continuous Fever among Europeans and coloured people. The cause of this fever is probably a blood parasite, an allied organism of Malaria in man, and Texas and South African Fever in cattle.

(vi) MOUNT FRERE.

DR. R. C. MORLEY HOARE, DISTRICT SURGEON.

(a) Water-supply.—This arises from a spring about a mile away from the village, of excellent quality, and could be made of great benefit

to the village if steps were taken, but natives break down the furrow with their sledges, sick cattle are allowed to water there, and it is polluted in its course by other animals. People also wash various articles in it.

It is the only water-supply that the Cape Mounted Rifles, who are stationed here, have to depend on, and, in my opinion, it should be enclosed, and I think the Government should take the matter in hand.

(b) Sewage and Drainage.—Nil.

(c) Collection of Night-soil, etc.—Only the Resident Magistrate, Assistant Resident Magistrate, District Surgeon, and one other inhabitant have pails, and these are removed once a week and buried.

(d) Overcrowded dwellings.—Nil.

(e) Butcheries and Bakeries.—There are two butcheries in the village. I take exception to the Hotel one, as the slaughtering place is within fifteen yards of the Hotel public w.c., and the storage house is a portion of the Hotel stable.

(g) Swine are not kept in the village.

(h) The whole district consists of native locations, the scavenging being done by dogs and pigs especially.

(i) There are two cemeteries. Both are well kept.

(l) There is no hospital accommodation.

(m) Small-pox.—The disease broke out in the district of Mount Frere on March 8th, 1903, and the district was clear on the 3rd July, 1903, but unfortunately one case occurred on December 6th, 1903. This was checked, and the district cleared by the 27th December, 1903.

There were 39 cases in all, resulting in two deaths—at least that came to my notice. I have no doubt that more cases occurred, as the natives are in the habit of concealing the disease as much as possible. All the cases were unvaccinated, and with regard to isolation I could only give orders, which were obeyed to a certain extent. With regard to the steps taken for the suppression of the outbreak, I took my orders from the Resident Magistrate. I went out at once, vaccinated those in the vicinity of the infected kraals, and put them in quarantine, and then revisited them three weeks afterwards. The cost amounted to £99 17s.

I do not think that sufficient vaccination was done in the district. As it is only by that means that Small-Pox can be stamped out, only 7,800 were vaccinated out of an estimated population of between 35,000 and 40,000, 3,449 being primary vaccinations. Systematic vaccination, as done in the Colony proper, is not carried out here; but I hope during the coming year to vaccinate all the natives, especially children under ten years of age.

Unless this is done, I am convinced that Small-pox will break out again. I am unable to give the fullest amount of success obtained in the performance of vaccination, as no secondary visits are authorised, but am perfectly satisfied with the results from enquiries I made. During the year I travelled on horseback 650 miles in connection with Small-pox and vaccination duty.

In conclusion I should like to point out the necessity for a small hospital here.

(vii) QUMBU.

DR. E. A. CULLIGAN, DISTRICT SURGEON.

(a) The same remarks as in last year's report apply to the water question, though no cases of water borne diseases have come to my notice during the year.

(b) Nil.

(c), (d), (e), and (f) Same as in previous reports.

(g), (h), and (i) No remarks.

(k) There were no cases of Small-pox in the district during the year, nor were there any cases either in the village or district of any contagious or infectious diseases.

The same remarks still hold good with regard to the Gaol premises, and it seems of little use to make any complaints thereon.

There were eight cases of Leprosy certified to during the year. I would again recommend that according as cases of Leprosy are reported they should be seen as soon as possible, and removed with the least delay.

(viii) TSOLO.

DR. LAURENCE W. POLE, ACTING DISTRICT SURGEON.

(a) In the district there is an excellent supply of water from the numerous rivers. It is of very good quality and very pure. The supply for the town is obtained from a good spring on the hillside above the town. The water can only be obtained pure from the spring itself, as that which flows from it in furrows can only be used for purposes of irrigation. The water in its course down the furrows is liable to great contamination, as there is no provision made for keeping cattle, etc., from polluting the streams. The only means of obtaining a pure water-supply must be either (1) to fence in the furrows and provide a covering for them, or (2) obtain a supply of water from the river at some distance from the town, this being brought to Tsolo by means of pipes.

(b) Sewerage and drainage are treated in a satisfactory manner.

(c) The pail system is in general use throughout the town, and by the white people in the district, and very satisfactory results obtain by this method.

(d) Nil.

(e) The condition of these is excellent, the principles of sanitation being well attended to.

(f) Nil.

(g) All satisfactory.

(h) The only cemetery in the district is that at the St. Cuthbert's Mission, about twelve miles from Tsolo. The condition of this burial ground is very good.

(i) Nil.

(k) There were four cases of Enteric Fever in Samuel's Ward in the early part of the year. The disease was brought by a boy from Stellenbosch, who became ill after reaching the kraal. Three other boys contracted the disease. There was one death, the first of the cases. The kraal was placed in quarantine, and no more cases occurred. There were no cases of Diphtheria in the district during the year. Small-pox has occurred in kraals in all parts of the district. It was nowhere of a very severe variety, and no deaths resulted. Most of the cases were very young children who had not been vaccinated, and those who, by reason of the length of time since vaccination or re-vaccination was performed, were no longer exempt from the disease. All those in the kraals who had become infected were vaccinated or re-vaccinated, and the kraals disinfected as far as possible, and by these means I have no doubt the spread of the disease was materially checked. The last case reported occurred in September, since when the district has been free. In the town there were three cases in June. Of these one died—an unvaccinated baby. All persons in the village were vaccinated or re-vaccinated, and infected persons were isolated and placed under guard. No other cases occurred in the town. Syphilis is prevalent among the natives, and may be seen in both the acquired and the congenital form. The most serious chest disease

among the native population is Consumption. This I attribute in great measure to ignorance on the part of those affected, as well as to the manner of living.

(ix) UMZIMKULU.

Report furnished by the Resident Magistrate, the District Surgeoncy being vacant.

The health of the district during the year has been fairly good, an outbreak of Small-pox in a mild form being the only epidemic that had to be coped with. A few cases of venereal disease have been reported, and a number of cases of Leprosy are still existent, but these latter are being slowly removed to various Asylums as room is found for them.

It seems a pity that there appears a difficulty in obtaining accommodation for female patients at the Asylums, as these unfortunate women are a continual source of possible contagion, besides frequently allowing for the possibilities of hereditary transmission.

(a) Water-supply.—Up to the present the people in the village have depended to a great extent upon rain water, but a water scheme has now been completed which should furnish a supply of good water. The people outside the village have a good and abundant supply of water.

(b) There is no drainage. The sewage is buried by each individual householder, and the system up to the present seems to be sufficient for hygienic purposes.

(c) The village is small and scattered, and the slop-water and kitchen refuse is thrown on the ground in unused places. This does not appear a particularly good proceeding, but it is difficult to see how it can be remedied here where there are no Village Management Regulations.

(d) There is no overcrowding, and the houses are all fit for human habitation.

(e) The only slaughter-house here is on the bank of the large Umzimkulu River, which flows swiftly all the year round. The bakeries are in a sanitary state and there are no dairies.

(f) The sale, storage and preparation of human food is in a satisfactory condition.

(g) Cattle, pigs, poultry, etc., where possessed, are kept properly.

(h) There is no village location, and the Natives living in the district are clean in their habits.

(i) The cemetery is well away and below the village, and is kept in good order.

(l) There is practically no place where Natives suffering from contagious diseases can be properly housed and isolated. This should be remedied if possible, as numbers of Natives pass through here on their way to and from work, and in many instances they return with Dysentery, Enteric, Scurvy and other diseases and push on so as to get to their own country and break down completely after crossing the border. The result is that frequently Natives suffering from these complaints have to be here nursed and fed back to health, and there is no proper place to put them. I would suggest that three or four Kafir huts be erected, which could be done at a cost of £20, and kept in repair for about £10 per annum.

(m) Small-pox is still in the district, but steps are being taken in the way of vaccinating all the Native population to stamp it out.

WALFISH BAY.

DR. F. C. SINCLAIR, DISTRICT SURGEON.

(a) The condition of the water-supply.—The Europeans resident here use condensed water, and this is of excellent quality and chemically pure.

The natives of this district use water obtained from wells at the native location of Sandfontein. This water is brackish to the taste, but is otherwise good.

(b) Sewerage and Drainage.—At present there is no system of drainage.

(c) Disposal of Night-soil.—Night-soil is carried to a safe distance from the settlement and buried in the earth. Slopwater is carried to some distance from the dwelling-houses and run into the sand.

Household refuse is brought by householders to a special railway truck which at intervals is taken to a distance and the refuse shot amongst the sand-hills.

(d) Overcrowded Dwellings, etc.—The European community here live in good and roomy houses built of wood and iron. The natives live mostly in huts constructed of any material obtainable. These huts, although flimsy in construction, are probably best adapted to the habits of these natives. I have never noticed any overcrowding.

(e) Management of Slaughter-houses, etc.—The slaughtering of cattle and other animals is conducted in a cleanly manner, and no nuisance arises from the cause.

There are no bakeries or dairies.

(g) The Keeping of Swine and Other Animals.—Horses, cattle, donkeys, and swine are kept by some of the residents here. The stalls and pens are kept in excellent order.

(h) The Good Order, Cleanliness, etc., of Native Locations.—The natives here live away from the settlement, a distance of some three miles, at the native locations Sandfontein and Wortel. Good order is the rule. Sanitation is provided for by nature.

(i) Cemeteries, etc.—The local cemetery is distant about one mile from the township, and is kept in good order.

(k) Nuisances as they arise are promptly dealt with by the Sanitary Official.

(m) There have been no cases of infectious disease throughout the past year.

The Local Authority has, in my opinion, done all that is necessary for the prevention of infectious diseases throughout the district.

No vaccination has been performed during the past year.

PART II.

Reports of Local Authorities.

URGENT.

Circular Letter.

Colonial Secretary's Office,
Local Government and Health Branch,
Cape Town, Cape of Good Hope,
1st December, 1903.

SIR,

I am directed to inform you that the Colonial Secretary will be glad to receive at the earliest date, for the purposes of the Annual Health Reports to be presented to Parliament, such information as you may be in a position to furnish in regard to the Health and Sanitation of the area under your jurisdiction during the year 1903.

The Report should furnish information on the following points:—

- (1) Water-supply: Describing the source, whether surface, river, spring, or other; whether the source belongs to or is under the control of your Local Authority, and whether it is situated within or without the area of your authority; by what means the water is collected, stored and distributed; whether by pipes or open furrows; whether the supply is inadequate, and whether the water is pure or is liable to pollution.
- (2) The system of collection and disposal of (a) night-soil, (b) slop-water, and (c) household and other refuse.
- (3) The extent to which infectious disease has prevailed, and what steps have been taken both for preventing and dealing with outbreaks thereof, and especially whether any Infectious Diseases Hospital accommodation has been provided.
- (4) What action has been taken to remedy any sanitary defects that many have been found to exist during the year (especially such as the pollution of water, the accumulation of filth and noxious matters, overcrowding of dwellings, and the habitation of any that are unhealthy or dangerous to life), and generally to prevent or limit the occurrence of preventable disease.
- (5) The extent to which rats are prevalent in the district of the Local Authority, the steps taken for their extermination and with what success.
- (6) Is a Health Officer employed by the Local Authority; if so, what are the conditions of his appointment?
- (7) Any other matters relating to the Health or Sanitation of your area which may be worthy of report.

In the event of your Local Authority employing a Health Officer, the above report should be made by him.

I have the honour to be,

Sir,

Your obedient Servant,

NOEL JANISCH,
Under Colonial Secretary.

To the Chairman or Mayor of every Municipality,
and the Chairman of every Village Board
or Local Authority under Act
No. 23 of 1897.

[G. 35—1904.]

II.—REPORTS OF LOCAL AUTHORITIES REGARDING WATER-SUPPLY, SANITATION, AND IMPROVEMENTS.

NOTE.—These have in most cases been somewhat condensed in order to economise space.

ABERDEEN.

ABERDEEN (MUNICIPALITY).

1. Aberdeen is supplied with water from a spring. The Gaol is supplied from an artesian well which gives an ample supply of good water. Rain-water, when we are favoured with it, is stored by most of the inhabitants for drinking purposes. The spring is under the control of the Local Authority. The water is conveyed from the spring to an intake dam, and thence by an open furrow to the town. When there is a freshet in the river the intake dam is flushed. The quantity of water is sufficient for domestic purposes; however, the owners of water erven, *Oliver Twist* like, sing out for more. The quality of the water is not very good, and is liable to pollution in many ways.

2. The tub system is coming more and more into use, and all pails are covered and disinfected as soon as they appear to become deleterious to health.

Slops are mostly removed by the nightman, and taken to the stercus pit.

Household refuse is regularly removed.

3. There have been ten cases of Typhoid and Enteric Fever. There has been one case of *Amaas* among Europeans. The family were at once quarantined. They were supplied by the Municipality with food, medical attendance, medicine, and a sufficient supply of disinfectants (carbolic acid and sulphur).

4. Greater care is bestowed on the removal and burial of carcasses of dead animals.

5. There are no rats, as far as is known, but mice are plentiful.

6. There exists some doubt in regard to the appointment of a Health Officer. Some while ago it was understood that the Government were considering the plan of getting the District Surgeon to act as Medical Officer, but it is not known if the arrangement was finally and mutually agreed to.

ALBANY.

(i) GRAHAM'S TOWN (MUNICIPALITY).

*Report of Dr. JAMES T. BAYS, Medical Officer of Health.

1. The main water-supply of the city is from the Milner Reservoir which is situated about six miles away, on land owned by the Town Council, but beyond the limits of the Commonage. The greater part of the catchment area is under the control of the Council, and is completely fenced off, no animals being allowed to trespass upon it, and the risk of contamination thus avoided as far as possible. The source of the water is both surface and spring, the area being very extensive the dam is filled after a steady twenty-four hours rain, or a heavy thunderstorm, while

* Forwarded by the Municipality for publication.

there are also springs which continue running even through a prolonged drought. The water is collected by means of a dam wall built across a valley, the reservoir when full holding fifty-two million gallons. From this the water is let off through a water tower into some miles of pipes to the Grey Reservoir, situated about half a mile from the centre of the city, and within the Municipal limits. By another water tower, the water is drawn off from the surface and flows into the iron pipes which convey it through the streets, from which leadings are taken into the householders' tanks, the water being turned on three or more times a week. During the recent drought there has been no scarcity of water, and at the present time the supply is abundant. In view of an increased demand for water, provision is shortly to be made by erecting another dam further up the valley, which will be of greater storage capacity than the present one, and will serve to impound some of the water which at present runs to waste. I have urged upon the Authorities the advisability of running the water direct from the Milner Reservoir into the town mains, and also of providing filter beds to remove some of the vegetable matter of which there is somewhat of an excess. The water otherwise is fairly pure, and I have not been able to trace any case of illness to its use. In addition to these reservoirs there are others within the limits of the Urban Authority, which supply certain parts of the city, these are liable to pollution from the large amount of bush and the number of trees which grow within their catchment area. I trust that before long the use of these reservoirs will be unnecessary, as the whole supply should come from the Milner, the area of which is almost entirely grass land.

2. (a) The present system of the removal of night-soil, though better than it used to be, is capable of still further improvement, and arrangements are being made to effect this from the first day of July, 1904. From that date a removal of night-soil from every house will be made compulsory at least once a week, the city to be divided into four wards, and a contractor appointed to each one. A pail of uniform size and shape has been adopted, and a fixed scale of charges has also been arranged. The removal of the pail and its contents would be an improvement on the present system of tipping the night-soil into the cart, and the provision of a separate service for cases of infectious disease is also necessary. The night-soil is placed in deep trenches in the commonage, two miles from town, and constitutes no nuisance, though I am of opinion that it could be advantageously used for agricultural purposes.

(b) An improvement has also been effected in the removal of slop-water. In those cases in which there is not sufficient ground around the house to dispose of the refuse water efficiently and where the people have been accustomed to cause a nuisance by throwing it into the street gutters, notice is served upon them by the Sanitary Inspector, calling upon them to have it removed in the slop-carts, which are run by private people. Each householder has to defray the expense of this removal.

(c) Household and other refuse is removed by individual arrangement, no accumulation is allowed if any nuisance is caused thereby. The refuse is removed to certain spots on the outskirts of the city, where all the material capable of being burnt is so treated.

3. During the past year fifty-eight cases of infectious disease were notified, being a decrease of forty-nine on the year before, when the number was 107, and a still greater decrease when compared with the year 1901, when 205 were reported. There were only sixteen cases of Enteric or Typhoid Fever, compared with forty-four in the preceding year, and of these at least five were contracted in the country. The number of Diphtheria cases was twenty-five, a slight increase, due, however, to an outbreak in February last, when ten cases were traced to one patient who

suffered from the disease. There were eight cases of Scarlatina, two of Leprosy, brought in from the country, and six cases of Small-pox. Of this disease there were three different outbreaks, but, owing to prompt isolation and re-vaccination of contacts, the trouble did not assume the proportions of an epidemic. Natives only were affected, two of them dying, both being unvaccinated infants. One case of Plague in a native was introduced by train from Port Elizabeth, the patient died one hour after arrival. The contacts were at once inoculated and quarantined, and the disease did not spread. A Hospital for infectious disease, the Victoria Fever Hospital, has now been built and is awaiting furnishing; accommodation will be provided for sixteen patients. In every case of infectious illness I visit the premises, endeavour to trace the source of the illness, and attend to the isolation if possible, and the after disinfection.

4. A Sanitary Inspector has been appointed during the last year, who makes systematic inspection of all premises within the Municipality, and issues orders, calling upon people to desist who may be found guilty of infringing any of the Sanitary Regulations, such as allowing the night-soil pails to become overful, allowing noxious matter to collect upon their premises, or throwing anything offensive into the streets. The work of the Sanitary Inspector does much to secure the cleanliness of the town. I have inspected dwellings at night occupied by natives or coolies in which overcrowding was likely to be taking place, and where such has been detected, steps have been at once taken to remedy it. Five buildings of unsuitable construction and much overcrowded with natives were ordered by the Town Council to be taken down, which was duly done.

5. For some months past endeavours have been made towards the extermination of rats and mice by offering a reward of two shillings a dozen for the former, and a shilling a dozen for the latter. By these means many thousands of them have been destroyed, and a considerable diminution in their number has taken place, as only a very few bodies are brought in each week.

6. I am employed by the Local Authority at a yearly stipend, my duties consisting of supervision of all matters connected with sanitation, infectious disease, inspection of food and drink, statistics, all matters relating to the health of the town, and attendance at the weekly meetings of the Sanitary Committee. I also attend the meetings of the Council when requested to do so.

7. In my last report submitted to the Town Council for the year ending March 31, 1903, the health of Graham's Town, so far as the European population was concerned, was shown to be satisfactory, the death-rate of the *bonâ fide* inhabitants having been 16.5 per thousand. The death-rate amongst young white children was still more satisfactory, there being only 26 deaths of children under 1 year of age, being in the ratio of 112 deaths to every thousand births, the average of 75 provincial towns in England having been 169 during 1902. Of the total number of white deaths there were 98 males to 61 females, while 37 per cent. had attained to 60 years of age or over, 23 were registered as over 70 years of age, 15 over 80, and 2 over 90. The death-rate amongst the coloured races continues high, being, as usual, in excess of the birth-rate. The contact of the natives with the towns appears to result in a heavy death-rate from Tuberculosis, this being seven times that of the European, and an excessive mortality amongst young children, especially at the onset of hot weather, when their death-rate more than doubles, as it has done during last December, this being principally due to intestinal troubles.

An Equifex Disinfector is in process of completion at the Fever Hospital, and should shortly be ready for use.

Considerable attention has been paid to sanitary matters during the past year with excellent results as regards the cleanliness of the town. The guttering of a portion of the river bed, which is now being carried out, will also be another step in the direction of a more perfect sanitary state of Graham's Town.

(ii) SALEM (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—This is supplied in dry weather from a never-failing spring of pure water issuing from a hillside, and is under the control of the Local Board; otherwise our supply is rain-water stored in tanks, which each house has.

2. Night-soil and refuse.—Each house has a w.c., and the dry-earth system is in vogue. Refuse is buried.

3. Infectious disease.—None occurred during the year.

4. Action in regard to Sanitary defects.—The sanitary arrangements are good.

5. Rats.—These are rather plentiful in our district; no steps have been taken for their extermination.

6. Health Officer.—No medical man is employed, but public health and sanitation are under supervision.

(iii) ALICEDALE (VILLAGE MANAGEMENT BOARD).

1. The water-supply is only that which falls on roofs, and is stored in underground or other tanks. At frequent periods the supply is very inadequate.

2. These are collected in pails, and are removed at frequent intervals by the Sanitary staff.

3. With the exception of an epidemic of Small-pox, confined, with one exception, to the natives, the camp has been free of infectious disease. There is no hospital for the treatment of infectious disease, but when required, such cases are located in tents removed from camp and location.

4. The Health Board exercises supervision, and, when occasion requires, prosecutes.

5. Rats are comparatively unknown here.

6. No medical officer is employed.

ALBERT.

(i) BURGHERSDORP (MUNICIPALITY).

1. Water-supply.—Owing to the prolonged drought, the supply of water from the town mains has been somewhat limited. A sufficient supply has, however, been available for domestic purposes.

2. No alteration has been made in the system of disposal of night-soil or household refuse. The Municipality has now undertaken the control and removal of all slop-water by a daily round of sanitary carts.

3. There have been a very few cases of infectious disease during the year. No accommodation has yet been provided for such cases.

5. There are very few rats in this town, and a reward is paid by the Municipality for all rodents destroyed.

6. No health officer is employed by the Municipality.

(ii) VENTERSTAD (MUNICIPALITY).

* Report of Dr. ALBERT P. COATES, Medical Officer of Health.

1. The water-supply is obtained from a spring under the control and within the area of the Local Authority. The water is collected and stored in a cement dam, and distributed thence by pipes. The supply was somewhat short in the latter part of the year, but is again quite adequate. The water is pure, and not liable to pollution.

2. (a) Night-soil is deposited in cesspools, except in very few cases, which are cared for privately. (b) Slop-water is removed by individual householders. (c) Refuse is collected and disposed of by the Municipal Council.

3. Infectious disease has not prevailed to any great extent. All the cases occurred in private houses, where it was easy to care for the sick, and carry out the necessary steps to prevent the disease spreading. There is no hospital accommodation of any kind, and I dread to think of what might occur in case of any outbreak, which could not be cared for privately.

4. The pollution of the town supply of water is impossible. Filth is not allowed to be accumulated within the area of the Authority. The overcrowding of dwellings, or the habitation of unhealthy ones, is gradually being prevented.

5. There are no rats in the district.

6. A Health Officer is employed, and his services are called for only in cases of necessity, and he is paid for work done, as is mutually agreed.

ALEXANDRIA.

(i) ALEXANDRIA (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The inhabitants depend chiefly upon rain-water, which is collected and conserved in tanks. In times of drought, resort is had to wells, of which there are three used by the public, and under the control of the Board. This well-water is brackish, but otherwise pure.

2. The cesspool system is in use. Household refuse is deposited outside the village area.

3. The only cases of infectious diseases during the year have been Measles, and one case of Small-pox, which broke out in the local Gaol, the patient being a native prisoner who had been brought here from Sandflats. There is no hospital accommodation for infectious diseases.

4. The Board has framed a set of Regulations to enable them to effectually carry out the proper sanitation of the village, but although these regulations have long since been submitted for the approval of His Excellency the Governor, they have not as yet been promulgated, and until these regulations have the force of law, the Board is powerless and unable to remedy and cure any sanitary defects that exist.

5. Rats are not particularly numerous. No steps have been taken to exterminate them.

6. The Board does not employ a Health Officer.

* Forwarded by the Municipality for publication.

(ii) PATERSON (VILLAGE MANAGEMENT BOARD).

There has not been a single case of sickness of any kind. The sanitation is all that could be desired.

 ALIWAL NORTH.

(i) ALIWAL NORTH (MUNICIPALITY).

* Report of Dr. L. WATSON, Medical Officer of Health.

1. Water-supply.—This is chiefly derived from rain-water collected in tanks. River-water is also carried to town in buckets and water-carts.

A water scheme is in process of construction by a system of turbines and pumps on the Orange River bank, the river water to percolate through porous pipes and sand from river bed to well, from which water will be pumped to a reservoir above the town, and thence distributed by gravitation pipes. This will be under Municipal control.

2. Night-soil.—The tub system is in vogue, and the night-soil removed to sanitary trenches. Duplicate tubs, and the cleansing of them is badly needed. It is hoped to secure these on obtaining water for flushing the tubs.

Slop-water.—There is no system of collection. This has been frequently recommended, but nothing has been done.

Household refuse is removed irregularly. The Council have recently undertaken removal on application by householder.

3. The following infectious diseases have been notified during the year:—

20 cases Enteric Fever (44 during December and January, 1901 and 1902).

48 cases Small-pox.

8 cases Chicken-pox.

9 cases Scarlet Fever.

3 cases Diphtheria.

4. Sanitary inspections are made, but there is no Infectious Diseases Hospital. This has been recommended.

Insanitary premises are inspected and ordered to be cleaned and renovated.

The Council have undertaken to remove refuse, but not slops.

The Small-pox cases were removed to an isolation camp under tents. Vaccination was enforced.

5. Rats are found, as is usually the case in most towns, but not in excessive numbers. The Council offered 3d. each for rats brought to the office for destruction. A comparatively small number were received.

6. A Health Officer is employed, and is expected to report to each meeting upon the health of the town, and to bring forward any suggestions deemed necessary for the maintenance and improvement of public health and sanitation; to make frequent inspections, and supervise work of the Sanitary Inspector.

7. Increased powers have been obtained with regard to the regulation of natives residing in town, and the building of houses. Old furrows, which have hitherto been a nuisance, are now being made with stone. It is highly essential that the removal of slops at regular and daily intervals be undertaken by the Municipal Authorities.

(ii) LADY GREY (MUNICIPALITY).

* Report of Dr. JOHN CRANKE, Medical Officer of Health.

1. Water-supply.—This is obtained from surface wells, one under control of the Local Authority, and many private wells within the area. The water is raised by a pump and carried by hand.

The supply is inadequate and from surface wells, and therefore liable to pollution.

A water scheme is contemplated, where, by damming a kloof above the town, an abundant supply of good water will be obtained.

2. The bucket system is in vogue.

3. The Authority's area has been almost entirely free from infectious disease. Towards the end of December one white and four natives developed Enteric Fever. The disease did not spread and the natives were instructed how to avoid infection, etc. Disinfectants were issued free where necessary. There is an Isolation Hospital.

4. Several cases of overcrowding have been dealt with, and several other nuisances abated during the year.

5. Rats are not very prevalent. The Local Authority offered a reward for their destruction, but without much success.

7. The Native Location is very badly situated on a slope above the town, but arrangements have been made for its gradual removal.

(iii) JAMESTOWN (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The water for the consumption of the inhabitants is supplied by several private and one large public well. The quality is pure and wholesome.

For irrigation purposes the water is supplied by the Schulp Spruit, taking its rise without the area of the Village Management Board. The water from the Spruit is stored in a large reservoir or dam, situated to the west of the town, from whence it is distributed by means of open furrows.

2. Night-soil.—Tubs are emptied three times a week, and night-soil buried in a place below the town appointed for this purpose by the Village Board of Management.

Slop-water.—Slop-water is disposed of privately by the inhabitants.

Refuse, Household, etc.—All refuse is conveyed by inhabitants to a spot on the eastern side of town appointed for this purpose by the Village Board of Management.

3. Infectious Diseases.—No infectious diseases prevailed in Jamestown during the year 1903.

No Infectious Diseases Hospital is provided.

4. Sanitary Defects.—There are no sanitary defects, etc.

5. Rats.—Rats are known to be in local stores, but no steps have yet been taken for their extermination.

6. Health Officer.—No Health Officer is employed by the Authority.

BARKLY EAST.

(i) BARKLY EAST (MUNICIPALITY).

1. In consequence of the long drought the flow from the fountain of good spring water on the north-west of the town, which has always supplied the town for drinking purposes, getting sensibly diminished, two more fountains of good spring water were opened beyond the Police Camp on the south-east of the town, in all cases it is conveyed through a pipe, and taken in buckets for home use. The fountains are covered in, the water running through a pipe.

The water from the adjoining farms of Grootvlei and Verdrinkfontein for garden supply, and for which £20 per annum is paid by the Council, also partly failed owing to the long drought.

2. All night-soil, rubbish, and slop-water is taken away and deposited in pits about a mile from town.

3. Two outbreaks of Small-pox occurred during the year among natives. The patients were isolated in a lazaretto until convalescent, and no deaths occurred. Chicken pox, Scarlatina, and Diphtheria were prevalent during the first part of the year, principally among children, but not fatal. Except a lazaretto there is no hospital for infectious diseases, patients are isolated and treated at their homes.

4. The Sanitary Inspector, who reports at each fortnightly meeting of the Council, has had special instructions in reference to overcrowding of dwellings and removal of noxious matter. His last report stated that the town was in a good sanitary state.

5. Rats have been discovered in one of the stores, being probably brought in goods received from East London. This matter is receiving attention, and the rats are being hunted by terriers.

6. No Health Officer is appointed by the Local Authority.

There is a Sanitary Inspector employed at a salary of £120 per annum.

7. At an adjourned meeting of the Council it was resolved that Government be requested to inform Council at what time and at what date they will afford the services of a competent Engineer to advise Council as to the best source of water-supply, and probable cost of a complete water system, with pumping station and reservoir, and pipes to each dwelling or erf.

(ii) RHODES (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from the Bell River and its tributaries, flowing out the Drackenbergen. The sources being unknown are thus under no known control, and without the area of the Local Authority.

The water is partially dammed in the bed of the river, and from there distributed for irrigation purposes throughout the village by means of open furrows.

Water for household purposes is not stored at all, but simply collected in buckets, etc., and is obtained from springs in the bed and banks of the river, and from a fairly strong fountain below the mountain on the south side of the village. All these waters are liable to pollution.

2. Cesspools are universally in use. Slops are usually thrown out on the ground. Household and other refuse is supposed to be thrown in places marked out for this purpose. Steps have been taken (by applying for the appointment of a village constable) to repair the sanitary and other defects.

3. There have been but three cases of infectious disease (reported by medical practitioners) in the village—one case of Diphtheria, one of Erysipelas, and one of Typhoid. The patients were isolated, as far as practicable, in their own homes, there not being any Infectious Diseases Hospital. There may have been more unreported cases of patients not having had medical attendance.

4. Steps have been taken to prevent the indiscriminate collection of dirt and rubbish near to any habitation, and to prevent the washing of clothes or bathing near to or above the springs. The fountain has also been thoroughly cleaned out.

5. There are but few rats here. Those known are water-rats, and are found in the neighbourhood of the river Bell.

6. No Health Officer is employed by the Local Authority.

7. At present a large amount of Diarrhoea prevails, due (according to medical opinions) to the defective supply of pure water.

BARKLY WEST.

(i) BARKLY WEST (VILLAGE MANAGEMENT BOARD).

No alterations have occurred since the last annual report, which still holds good.

(ii) DANIEL'S KUIL (VILLAGE MANAGEMENT BOARD).

1. There is an ample supply of water available within the area of the Board. The water is obtained from springs and conveyed in open furrows.

2. By regulation, every householder is compelled to provide his property with proper privies to the satisfaction of the Board.

4. Officers are appointed to prevent the accumulation of filth or the pollution of the water-supply.

Sanitation generally is considered very satisfactory, no immediate necessity to remedy any defects having been experienced.

The Dairy Act has not been proclaimed within the area of the Board, there being no dairy farms within the limits.

The health of the inhabitants has never been better than at present, the death-rate having been exceedingly low.

(iii) BOETSAP (VILLAGE MANAGEMENT BOARD).

No report furnished.

BATHURST.

(i) BATHURST (MUNICIPALITY).

The water-supply is good and almost every dwelling has iron tanks. A good supply is also obtained from springs situated within the area of the village.

2. The houses in the village are scattered; each occupier disposes of his own night-soil, slop-water, and household and any other refuse.

3. No infectious disease has prevailed.

4. No action has been taken, as none has been required.

5. There are but very few rats.

6. No Health Officer is employed.

(ii) PORT ALFRED (MUNICIPALITY).

The report of the District Surgeon of Bathurst, who is also Medical Officer of Health to the Municipality, will be found on page 23.

 BEAUFORT WEST.

BEAUFORT WEST (MUNICIPALITY).

* Report of Dr. A. WESTBY, Medical Officer of Health.

1. The water-supply may be divided into two heads: (a) the pipe or drinking water; and (b) irrigating water.

(a) The drinking water, which is conveyed in pipes from a covered spring under the Molteno Pass, about seven miles distant, is pure and healthy. It is stored in a small cemented reservoir a little distance above the town, where the supply can be controlled at the will of the Authorities. Owing to the drought which prevailed during the year, this supply was greatly diminished, and at one time we almost had a water-famine staring us in the face.

(b) The water for irrigating purposes is derived from three sources, viz., the fountain under the dam, the dam itself, and the fountain in the Gamka River. The water is conveyed through the streets in open furrows and no doubt is greatly polluted in its course. Owing to the drought, the dam supply and its fountain completely dried up, and a steam pump was put in at the Gamka, which gave a small supply, and so kept alive the trees, etc. Both these sources have proved ample till the terrible drought came on, and I am sure that, given our normal seasons, they will still be found sufficient for the wants of the town.

2. The night-soil is conveyed in an open wagon to some distance outside the town. This system is not carried out properly. The buckets are leaky and not properly cleaned and disinfected. After the buckets are put in the wagon, as often as not there are no lids placed on them or most probably misfits, which are worse than useless. The buckets themselves are of different diameter, thereby causing great inconvenience and messing in the closets. The stench from this wagon as it wends its way through the streets at night is abominable.

During the year a slop wagon was started for the collection of slops, and has proved a great comfort and convenience.

Household refuse is carried away by the Municipal wagon twice a week.

3. There were thirty-five cases of Enteric Fever and twenty-one cases of Diphtheria reported during the year. This is a great drop from the previous year. There is no hospital accommodation whatsoever.

4. The streets and furrows have been better looked after than heretofore; the former have been kept watered when practicable.

5. There are no rats.

 BEDFORD.

BEDFORD (MUNICIPALITY).

1. The source of the water-supply—two springs on the Maastrom Estate—is under Municipal control for sixteen hours a day and is distributed by open furrows. The supply would be adequate if brought down

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in pipes, but being distributed by open furrows, a large percentage is lost. The water is pure at the springs, but is liable to pollution by reason of the open furrows.

2. The tub system is in vogue, night-soil being removed by Municipal contractor. Slop-water and household and other refuse is also removed by Municipal contractor.

3. Typhoid Fever has been fairly prevalent. As most of the cases have been traced to the drinking of impure water, it is hoped that if the new water scheme (which provides for water being distributed in pipes) now being considered by the Council is carried out, Typhoid will decrease.

No Infectious Diseases Hospital accommodation has been provided.

4. Insanitary huts have been destroyed, and others are under notice to be pulled down. Filth and other noxious matters are removed at intervals by Municipal contractor. Overcrowding in native huts has been attended to.

5. There are very few rats in the Municipal area.

6. There is no Health Officer, but the Council employ a Sanitary Inspector.

BREDASDORP.

(i) BREDASDORP (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The village derives its water-supply from a spring which is under the control of the Dutch Reformed Church. It is carried into the village by an open furrow enclosed by wire, and is sufficient for domestic purposes and partly for irrigation. The water is pure.

2. Night-soil, etc.—These are disposed of by carting at night.

3. Infectious Diseases.—Nil.

4. Sanitary Defects.—Nil.

5. Rats.—There are none in this area.

6. No Health Officer is employed.

(ii) NAPIER (VILLAGE MANAGEMENT BOARD).

1. The water-supply is derived from a spring situated partly within the area of the Board, and is conveyed through an open, muddy furrow, and is dangerously subject to pollution.

2. Night-soil, slop-water, and household and other refuse are collected and disposed of by the inhabitants themselves at pleasure.

3. Fever and Throat Diseases have been more prevalent than formerly. All precautions have been taken as far as possible. There is no hospital accommodation.

4. Little has been done in this direction with the limited power possessed by the Board. In some cases, certain regulations have not been conformed with.

5. Rats are not prevalent in this area.

6. No Health Officer is employed.

7. It is highly necessary that some steps be taken to supply the village with pure water for household purposes. With the increase of the inhabitants and the state of the water, which is naturally good, but has been rendered impure, infectious diseases must break out sooner or later.

BRITSTOWN.

BRITSTOWN (MUNICIPALITY).

1. Water-supply.—The water-supply of the village of Britstown is obtained from a perennial spring situated at the north-eastern side of the town, within the Municipal boundaries. The spring is protected by a small brick building built over it, whence the water is led out through an iron pipe. The supply for domestic and other purposes is conveyed by water-cars.

Two wells are being sunk sixty yards apart, situated at the south-western side of the town, to be connected by a furrow, whence the water will be conveyed into the furrow leading from the perennial spring by means of a syphon.

2. Disposal of Excrement.—The pail removal system is in force. Night-soil is deposited about three miles outside the village in trenches.

Household and other Refuse.—The Municipal carts make a house-to-house visit three times per week to collect and remove all household and other refuse, which is deposited at a place about two miles outside of the town specially pointed out by the Municipal Board.

3. Infectious Diseases.—Thirty-nine cases of Diphthèria were reported by the District Surgeon as occurring within the Municipal Board's jurisdiction. All houses where an outbreak of disease was reported were placed under quarantine for not less than fourteen days from the date of outbreak. Guards were appointed by the Board to watch the houses during the period of quarantine, and to see that nobody left or entered such houses.

4. With regard to the water-supply, no pollution has occurred, and consequently no alterations have been made.

 CALEDON.

(i) CALEDON (MUNICIPALITY).

* Report of Dr. A. J. ALBERTYN, Medical Officer of Health.

1. Caledon obtains its water-supply from springs in the Zwartberg Mountains. The water is pure, clear, palatable, adequate in supply, and collected at the fountain head in a cemented well, from where it is carried by pipes and given to the public by means of pumps distributed in various parts of the village. There is nothing to cause its pollution at its origin or in transit, but the pump system is undesirable, and the Municipal Authorities, recognising the danger of it, have introduced the distribution of water by means of pipes to the various houses for drinking and other domestic purposes. Water for irrigation purposes is also obtained from springs in the Zwartberg Mountains, and collected in a reservoir at the foot of the mountain. This reservoir contains some 6,000,000 gallons of water. The water is led to the village in open furrows, and distributed to the public at regular and stated hours.

2. (a) Night-soil is disposed of by means of carts and deposited in holes excavated for the purpose some considerable distance from the village. The carts call at the various houses, and empty buckets in place of full ones are left. It is a matter of regret, however, that the removal vans are permitted to commence operations at about 10 p.m. This appears to be a source of annoyance to some of the public, according to reports that have reached me on that point.

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(b) The slopwater of the town is, in a few instances, removed by means of patent pipes, but the method generally adopted is that of removing by carts, a system which is to be deprecated as the removal operations are undertaken during day time, and very often the carts are over-filled.

(c) Refuse generally is removed in carts, which call and empty the bins at the various houses, the contents being subsequently deposited about half a mile on the north side of the village. This method I deprecate most strongly, because the north wind often prevails, with the result that the inhabitants on the north side get full benefit of filthy, blown paper refuse, and bad odours generally. It would prove of material benefit to the health of the community if this refuse heap was utterly destroyed and a suitable place selected some distance outside the village. The present site is an eyesore.

3. During the year there have been epidemics of the following infectious diseases:—Influenza, Measles, and Typhoid. They were none of them dealt with by the Local Authority. There is no Infectious Diseases Hospital, except the one under the Contagious Diseases Prevention Act.

4. There is not much overcrowding of dwellings, nor any dwellings unfit for human habitation. Occasionally crowds of Malays visit Caledon, and remain for some two or three days. During their stay, a great deal of overcrowding has taken place, resulting in numerous complaints from inhabitants. Steps will be taken to obtain prosecutions in cases where overcrowding is permitted.

The management of butcheries, bakeries, dairies, and other trades affecting health is very satisfactory. An improvement has taken place with regard to slaughter-houses. There are two, which are located some distance from the town, in a healthy area.

The sanitary defects of the village are very apparent, none of the furrows of the lanes being flushed, and indeed, very few of the open furrows along the main street receive the necessary attention in this direction. The sooner most of the furrows, along the main streets at least, are cemented and regularly flushed, and thereby the stench that often emanates from them being removed, the better will be the general state of health of the community. I fail to understand why the Municipal Authorities have so long delayed in giving proper attention to the upkeep and cleanliness of their furrows along the main thoroughfares.

From time to time periodical inspections are made by the Sanitary Inspector of premises, etc. This custom has had a beneficial effect on the health and cleanliness of the town generally.

5. Rats are not prevalent in the district of the Local Authority—in fact, are unknown.

6. The Health Officer receives an honorarium of £10 per annum, and is occasionally requested to report on the cleanliness of back-yards, etc., and to write a report on the health of the village once a year.

(ii) GREYTON (MUNICIPALITY).

*Report of Dr. R. D. PARKER, Medical Officer of Health.

1. The water-supply is from numerous springs which form two large streams of water of excellent quality from Bushman's Kloof and Naauwpoort.

These streams only run for a short distance before they come to Greyton, and are very little liable to contamination. The water is conducted through the Municipality in open sluits. There is a good fall, and the current is rapid.

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No animals are allowed to be watered in these sluits, but they are taken to the river at a lower level than where the water leadings start from. There is a water overseer employed by the Municipality to see that these sluits are kept properly open and are not contaminated.

The source of the water-supply is outside the limits of the control of the Municipality.

2. The night-soil is disposed of by each individual inhabitant burying it in his own garden. These gardens are almost all at a lower level than the sluits.

3. There is no Infectious Diseases Hospital. Each house is separate, and there is little overcrowding.

I have received no report of any death from any infectious disease during the past year.

4. For a primitive village of this kind the sanitation is good, and at present I see no practicable means of material alteration.

5. So far as I can gather rats are unknown in the village.

6. A Health Officer is employed by the Local Authority.

(iii) HERMANUSPETRUSFONTEIN (VILLAGE MANAGEMENT BOARD).

1. The water-supply is the same as last year.

2. (a) Night-soil is periodically removed at the expense of each householder.

(b) No regulation has been made regarding slopwater which is deposited by each householder where he thinks best.

(c) Every householder deposits his refuse at a place pointed out by the Board.

3. We have been free from any infectious diseases, and no Infectious Diseases Hospital accommodation has been provided.

4. With regard to this question nothing is really as yet necessary.

5. There are no rats here.

6. No Health Officer is employed.

(iv) STANFORD (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from a spring rising south of the village and within the area of the Board, but during its course going out of it, and again entering it. The water is conveyed by open furrow and of sufficient quantity, and in itself pure.

2. Night-soil is used as manure in the gardens.

3. No infectious disease has occurred during the year; there is no hospital accommodation.

4. There is no necessity to remedy any sanitary defects.

5. No Health Officer is employed by the Local Authority.

(v) VILLIERSDORP (MUNICIPALITY).

*Report of Dr. S. J. J. VAN DER POEL.

1. Water-supply.—This is derived from two sources; the nothern part of this town being supplied with water from the Elands River taken out at a point near the boundary of the commonage, and conveyed by means of a furrow, the southern portion obtaining its supply from springs arising in Aasvogelkop adjacent to the commonage and also conveyed by means of a furrow to this part of the town.

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For domestic and drinking purposes the water has to be obtained from open furrows running through the town.

The supply of water is abundant in quantity and excellent in quality, but the fact of its being conveyed by means of open furrows renders it extremely liable to pollution.

2. There is no regular system of scavenging being carried out.

For the collection and disposal of (a) night-soil, the bucket system is adopted and carried out in a fairly systematic manner, the excrement being finally deposited on private ground adjoining the commonage and situated near to the Elands River—below the point at which a supply of water is taken out for the town.

(b) and (c) The manner of disposal of slop-water, and household and other refuse leaves much to be desired, it being left to the option of the occupier whether such refuse be removed by Municipal cart or deposited on erf or garden.

3. Since the date of my last report—June 8, 1903—I have had to notify the occurrence of four cases of Typhoid and one of Scarlet Fever. No hospital accommodation has been provided for such.

4. Beyond the cleansing of water-furrows and instructions given to householders to keep their premises and erven clean, no further steps have been taken to remedy sanitary defects, or to limit the recurrence of preventable disease.

5. The presence of rats in the district of this Local Authority has not been brought to my notice.

6. No Health Officer is employed by the Local Authority.

CALVINIA.

(i) CALVINIA (VILLAGE MANAGEMENT BOARD).

1. The water-supply is as reported previously. We are dependent upon well water, each erf-holder having his own well. The supply is adequate, but very liable to pollution, on account of high winds blowing germs and rubbish into the wells, against which the Board has no control. We would suggest that Government come to the assistance of the public for making a reservoir, in order to obtain pure water.

2. Night-soil.—The Board has a proper cart by which night-soil is removed, and employs a contractor who removes night-soil and refuse. Inhabitants have proper closets supplied with tubs.

3. Typhoid Fever has been prevalent during the year, and will continue until the water is obtained from another source.

There has been no Hospital in existence since the time of the war. The Board at present has not sufficient funds, but has requested the Divisional Council to levy a rate to meet the necessary requirements, and we hope to build a Hospital shortly.

4. Sanitary Defects.—There is a regulation in force that wells be cleaned once a year. As the majority of people have “bakkies” pumps and aermotors, the water is continually being pumped out, and no stagnant water is allowed to remain in the wells or pools. An inspector is employed to see that the yards, closets, and streets, etc., are kept clean.

5. There are no rats here.

6. No Health Officer is employed, but the District Surgeon does the work.

(ii) BRAND VLEI (VILLAGE MANAGEMENT BOARD).

1. The water is obtained from the Zak River, a perennial stream, and conducted by means of a large furrow for a distance of about twelve miles into the town dam. From the dam, connection is made with the various houses by means of an open furrow.

2. Most of the houses have enormously large sowing erven attached, and all refuse of a vicious nature is buried on the owner's property, subject, of course, to the approval of the Board. In other cases the refuse is taken to a spot distant about one mile from the village, and buried there.

3. Disease is practically unknown here.

4. A member of the Board has been specially designated to attend to these matters, and if any breach occurs takes prompt action. Our dam has been empty for almost eighteen months, and people now cart their water for a distance of about three miles.

5. Rats are seldom seen.

6. No Health Officer is employed.

 CAPE.

(i) CAPE TOWN (MUNICIPALITY).

1. Water-supply.—The City of Cape Town is supplied with water from a gathering ground on the Plateau of Table Mountain, whence the water flows into a reservoir known as the Woodhead Reservoir. The previous water-supply, namely, that derived from springs on the North-West of Table Mountain, is still in existence, the water from which flows into Molteno Reservoir. Certain parts of the City are supplied with water direct from the springs. Another reservoir is in course of construction on Table Mountain, and when completed the dearth of water which is experienced during January, February and March of each year should cease to be felt.

2. The scavenging of the city is done departmentally, all garbage and dirt from most of the streets being collected daily. The sewerage system is now completed, and excreta and slop-water from the houses in the City are conveyed thereby to the sewage outfall at Green Point. The practice of removing excreta in pails ceased at the end of December, 1902. The refuse from the houses is collected daily, removed by rail and disposed of for land reclamation beyond D'Urban Road.

5. In regard to the steps taken for the extermination of rats, it may be stated that a rat-catcher has been employed during the whole year, whose duties are to visit premises known or suspected to be infested with this vermin and to destroy the same. The number of rats destroyed during the year was 3,962.

6. The Medical Officer of Health appointed by the Corporation is under agreement to devote the whole of his time to the duties of the Office.

With regard to sections Nos. 3 and 4, full particulars with regard thereto may be obtained from the report of the Medical Officer of Health for the City, published in the Mayor's Minute.

(ii) CLAREMONT (MUNICIPALITY).

*Report of Dr. GEORGE G. EYRE, Medical Officer of Health.

1. Water-supply.—The Municipality is supplied from two springs, the Albion Spring, situated in the adjoining Municipality of Rondebosch, and the Kommetje Spring, within the Claremont Municipal area. The water from these sources is pumped direct into the mains, and this, for nine months of the year, is the sole water-supply. For the remaining three months this is supplemented by a supply derived from the drainage of the mountain slopes which is collected in a reservoir.

The water is consumed as follows:—10,000 gallons per diem are distributed to the street watering posts, the washhouses consume 4,250 gallons, 65,801 gallons are supplied to the meter consumers and 157,000 gallons are supplied to the cottage tanks by the dribble system.

For all domestic purposes, the supply is sufficient and the water is of very good quality, containing a very small amount of mineral matter.

2. Disposal of Excrement.—The pail system is in general use. The pails are removed once a week from ordinary dwelling-houses, twice a week from boarding-houses and three times a week from railway-stations and large industrial establishments, such as breweries. The excrement is buried in trenches at night in sandy soil. These are covered over in the early morning. The whole deposit site is kept under regular cultivation, producing fine crops. The charge levied for night-soil removal is £1 per closet per annum.

Household Refuse.—This is collected by Municipal carts three times a week and is deposited in any vacant ground available, being covered at the same time with soil.

3. Infectious Diseases.—Enteric Fever, Scarlet Fever, Diphtheria and Erysipelas have all been notified and an epidemic of Enteric Fever appeared to threaten in January. Several cases, whose proper isolation could not be secured, were removed to hospital. Since then no further case has been notified in the locality.

4. Remedies for Sanitary Defects.—The work of kerbing and guttering the roads has progressed, and many roads, formerly puddles in many places from drainage of the surrounding houses, have been rendered dry and clean.

7. System of Scavenging.—The Main Road is scavenged twice daily, the side roads leading therefrom once daily, and the roads in the outer portion of the Municipal area once a week or once a month as need arises.

Vital Statistics.—In estimating the relation of vital totals to population, the enumeration of population used is that compiled in July, 1902, viz., 6,482 Europeans and 6,756 Coloured. The population is there, probably, understated.

Births:—

European.		Malay.		Coloured (Mixed).		Total.	
M.	F.	M.	F.	M.	F.	M.	F.
122	104	54	47	218	177	394	328

The total of births is therefore 722 (compare 734 in 1902, 673 in 1901, 543 in 1900, 585 in 1899), of which 93 were illegitimate (compare 107 in 1902, 71 in 1901, 85 in 1900, 66 in 1899). The births in the Flats area were 316, viz.:—European, 80; Malay, 37; Coloured, 199, and of these 47 were illegitimate; 31 children were the fruit of mixed marriages,

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the father being European and the mother coloured in 25 cases, and in 6 cases the mother being European and the father coloured. There were 31 still-births, 17 of them in the Flats area.

Calculated on the population above stated, the rate is, for Europeans 34 births per 1,000 living, for coloured 74, and for both classes combined 54 per 1,000.

Deaths:—

European.		Malay.		Coloured (Mixed).		Total.	
M.	F.	M.	F.	M.	F.	M.	F.
42	60	38	35	111	123	191	218

The deaths, therefore, total 409 (compare 403 in 1902, 357 in 1901, 342 in 1900, 281 in 1899). In the Flats area there were 170 deaths (compare 169 in 1902), including 35 Europeans, 25 Malay and 110 Coloured.

This indicates a general death-rate of 30 per 1,000, which is compounded of an European rate of 15 and a coloured rate of 45. This, I would again emphasise, is probably only distantly approximate. The ratio of births to deaths is otherwise. The ratio for all classes is 1·7 births to 1 death (compare 1·7 in 1902, 1·8 in 1901, 1·8 in 1900, 2 in 1899). For the coloured the ratio is 1·6 to 1 death (compare 1·6 in 1902). In the Flats area the ratio is 1·7 to 1 (compare 1·8 in 1902).

Ages at Death:—

1 to 2	2 to 5	5 to 15	15 to 45	45 to 60	60 to 80	over 80
227	35	20	54	24	31	17

Deaths of Infants.—There died 227 infants of whom 51 were European and 176 coloured (compare 191 in 1902, 205 in 1901, 201 in 1900, 152 in 1899). Of Diarrhoea or Gastro-enteritis there died 82 (compare 82 in 1902, 82 in 1901, 83 in 1900, 62 in 1899), of Broncho-Pneumonia 36, of Tuberculosis 16 (8 from Meningitis), 6 from Convulsions, 8 from Tetanus, 3 from Syphilis, 6 from Whooping Cough, 2 each from Hæmorrhage from the Navel, Nephritis and Measles, one each from Influenza and Croup. Fifteen died as a consequence of premature birth and sixteen from unrecorded causes. The still-births, which are included here, were 31, 25 coloured and 6 European.

Including these, the ratio of infant deaths to births is 304 per 1,000 (compare 303 in 1902, 304 in 1901, 312 in 1900).

Deaths 2 to 5 Years.—Deaths at this age (35) include 2 European, 11 Malays, and 22 coloured mixed. There died 12 from Broncho-Pneumonia, 11 from Phthisis, 6 from Diarrhoea, 1 from Croup, and 1 from Whooping Cough.

Deaths 5 to 15 years....Of the 16 deaths recorded at this age, 8 were from Tuberculosis, 2 from Pneumonia, 1 each from Peritonitis, Tetanus and Rheumatic Fever, and 3 from unrecorded causes.

Deaths 15 to 45 years.—Of these, 25 were from Tuberculosis, in the form of Phthisis, 6 from Pneumonia, 3 each from Enteric Fever and Heart Disease, 2 each from Uræmia, Child-birth, and Ulcer of the Stomach, 1 each from Rheumatic Fever, Abscess, Dysentery, and Accident. The cause was unrecorded in 5.

Deaths 45 to 60 years.—Of these, 7 were from Cancer, 4 from Apoplexy, 3 from Tuberculosis, and 1 each from Appendicitis, Bronchitis, Dilated Stomach, Dysentery, Cirrhosis of Liver, Heart Disease, and Paralysis. Two died from Uræmia, and in one case the cause was unrecorded.

Deaths 60 to 80 years.—Of these, 7 were from Cancer, 5 each from Apoplexy and Heart Disease, 3 each from Old Age and Pneumonia,

2 each from Tuberculosis and Bright's Disease, and 1 each from Dysentery, Gout, and Enlarged Prostate.

Deaths over 80.—These number 17, viz., 7 Europeans, 3 Malays, and 7 coloured. The ages of the Europeans were 103, 100, 91, 85, 84 and 82; of the Malays, 96, 85 and 80; and of the coloured, 100, 90, 88, 86, 86, 81 and 80. The causes of death are stated to be: 9 from Senile Decay, 3 from Heart Disease, 2 from Bronchitis, 1 each from Erysipelas and Apoplexy, and 1, the cause unrecorded.

Causes of Death.—With the exception of Infant Diarrhoea (82), Tuberculosis is the most frequent cause of death, and this disease is, apparently increasing. There died of it 59 persons, 50 coloured and 9 European (compare 42 in 1902, 32 in 1901, 38 in 1900 and 39 in 1899). Of these 59, 26 died in the Flats area. Tuberculosis as Phthisis falls most heavily on those in the middle period of life (15 to 45). Twenty-five persons died during that age period (compare 17 in 1902, 21 in 1901, 20 in 1900, 20 in 1899).

Bronchitis and Pneumonia rank next with 57 deaths (compare 66 in 1902, 58 in 1901, 78 in 1900, 78 in 1899).

Of Cancer there died 14, a considerable increase (compare 8 in 1902, 8 in 1901, 4 in 1900 and 7 in 1899). Two women died in childbirth (compare 3 in 1902, 4 in 1901, 1 in 1900, 1 in 1899).

Infectious Disease.—Sixty-seven cases of Infectious Diseases have been notified (compare 53 in 1902, 87 in 1901). The cases included Enteric Fever, 40 (Flats 20); Scarlet Fever, 10 (Flats 2); Diphtheria, 15 (Flats 4); and Erysipelas, 2 (Flats 0). The cases of Enteric Fever were equally divided between European and coloured; Scarlet Fever, 8 European and 2 coloured, and Diphtheria, 11 European and 4 coloured.

Conclusion.—The state of the public health, as derived from vital statistics, shows little alteration during the past two years. The births are slightly less (722 to 734), and the deaths slightly more (409 to 403) than in 1902. The deaths in the Flats area are practically the same (170 to 169); Tuberculosis and Cancer, however, show a noteworthy increase as causes of death.

Combined with general improved sanitation, which is now being energetically dealt with, the better care and feeding of infants promises the best means of reducing the death rate. Faults in this arise, in the main, from ignorance and scarcity of good milk, as a very large proportion of babies are bottle fed.

The appointment of a female Sanitary Inspector, detailed especially to instruct persistently the mothers of the poorer classes in the care of their babies would, I think, show good results.

(iii) D'URBANVILLE (MUNICIPALITY).

* Report of Dr. L. F. BICCARD, Medical Officer of Health.

1. The water-supply is obtained from two springs situated within the Municipal area on its southern side; both springs are well covered in, and from here the water is led away in galvanised pipes, and distributed from house to house; there is, therefore, no risk of pollution either at the source or during transit. The supply is plentiful and very pure.

2. Night-soil is still buried in each erf, and requires the attention of the Local Authority; there are, however, no cesspools. Slop-water is also simply thrown away within the grounds of each owner.

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Household and other refuse are removed by the Municipal carts, and deposited outside the village.

3. The village has been remarkably free from infectious diseases during the past year, and as yet no Hospital accommodation has been provided for any outbreak.

4. As yet the Local Authority has found no necessity for dealing with polluted water, accumulated filth, or overcrowding of dwelling-houses. One butchery found insufficiently ventilated has been closed up by the Authority.

5. Rats are fairly plentiful and are caught privately; the Local Authority has as yet taken no steps in the matter.

6. A Health Officer is employed without any special conditions.

7. The village is fairly well kept, but still there is much room for improvement; such improvement, however, can only be expected when the Municipal regulations are in force, and the Local Authority, therefore, has more power to deal with deficiencies.

(iv) GLEN LILY, FAIRFIELD AND PAROW (VILLAGE MANAGEMENT BOARD).

1. The residents of the above-named townships are mostly using surface water, which can be obtained at a depth of about eight feet. The water is good and pure. Where no pure water is obtainable people catch rain water.

2. Up to the present time, night-soil, slop-water and refuse are buried, as people in general have large pieces of waste ground at their disposal; arrangements are being made to remove all refuse to some distant place in order to clear the townships of all rubbish.

3. Infectious disease has not prevailed during the year.

4. Sanitary arrangements are under consideration. Preparations are being made to put buckets in every w.c., and compel the inhabitants to have them removed every fortnight; this and other refuse is to be removed about a mile from the townships. As there were no building regulations before the formation of the Board, we are prepared to put same in force without delay.

5. Rats are not prevalent.

6. No Health Officer is employed yet, but sanitary matters are supervised by the Board.

7. The townships are very healthy, and the Board has been elected for the special purpose of improving these places and making proper sanitary arrangements.

(v) GREEN POINT AND SEA POINT (MUNICIPALITY).

* Report of Dr. Geo. A. BATCHELOR, Medical Officer of Health.

The Suburban area of Green Point and Sea Point, under the control of the Green Point and Sea Point Municipality, has an area of 1,330 acres.

Green Point approximately covers an area of 200 acres. Sea Point, 630 acres; besides which there is Municipal Land, Mountain portion 440 acres and Beach portion 60 acres.

Boundaries.—From the junction of Boundary Road with Somerset or Green Point Road, thence along the North-Western side of Boundary Road on the South-Eastern boundary of Lots 1 and A (Green Point Lots) to a point where the line of the Western side of Strand Street, prolonged northwards,

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shall intersect said South-Eastern boundary at the Southern beacon of Lot A; thence in a straight line or water-shed to the summit of Signal Hill; thence along the watershed of the Lion's Rump to the summit of Lion's Head; thence in a straight line to the South-Western boundary of the property called Botany Bay; thence along the South-Western and Western boundary of said property prolonged Northwards until it runs into the sea at low water mark; thence along the seashore at low water mark to its intersection with a straight line running parallel with and twenty yards East of the Cross Road branching off from Somerset or Green Point Road to Three Anchor Bay, as it existed in 1839 to low water mark; thence along said straight line running twenty yards East of such cross road, to a point twenty yards North of Somerset or Green Point Road; thence along a line running parallel with and twenty yards distant from the Green Point or Somerset Road as it existed in 1839 (on the North or North-East side) to a point opposite the North-Western side of Boundary Road; thence to the junction of Boundary Road with Somerset or Green Point Road, the point first named.

Population.—The estimated population of this area is 7,500, and for all statistical purposes this figure is made use of.

This estimated population was arrived at by a rough census taken on the 1st July, 1902. The Census result for the combined area gave a population of 7,560—of this number Green Point claimed 2,495, and Sea Point 5,065. Of the total number 6,261 were European, and the remainder 1,300 Coloured.

Green Point: 2,114 European, 381 Coloured.

Sea Point: 4,146 European, 919 Coloured.

The previous Census taken in May, 1899, gave the population as:—Green Point, 1,871; Sea Point, 3,720; total, 5,591.

The Census of 1902 showed an increase of population over that of 1899 of 1,969, or roundly, an increase of 2,000 in three years. It may, therefore, be confidently stated that the present population of the combined areas is considerably over 8,000. This Estimate is further borne out by the fact that during the year 1903, 147 new buildings have been erected within the Municipality, in spite of which rents are maintained.

Water-supply.—The water supplied to the area for domestic purposes is practically entirely derived from the Reservoirs on the slopes of Table Mountain, under the control of the Cape Town Corporation, and is from the same source supplying Cape Town. The water is supplied by means of covered pipes, and is supplied on the dribble system—each house having one or more receptive tanks from which the domestic requirements are directly drawn. These tanks are in most cases placed on an elevated position, where they are exposed to dust and heat, and not infrequently the tanks are placed in almost inaccessible positions, with the result that they go for months and sometimes for years uncleaned.

The Sanitary disadvantages of this dribble system with its accompanying tanks, over the continuous supply system is well-known to Sanitarians, and has been brought under notice in previous reports. It is hoped that with a more abundant water-supply the present system will be replaced by the more sanitary, continuous and direct supply.

The Municipality possess a small Reservoir situated within the Municipal area which is fed from springs at Camp's Bay. The water from this Reservoir is used for Municipal purposes—such as the watering of roads and flushing of drains. The Municipality also possess a Reservoir supplied with sea water from a pumping station situated at Three Anchor Bay. This sea water is used for watering of roads and flushing of drains.

Water Shortage.—A shortage of water was experienced in the early part of the year, that is, towards the end of the summer. The water-

supply while the shortage lasted was cut off during certain hours. During the shortage, which fortunately was not of long duration, all that could be done to mitigate any inconvenience was done by the Municipality.

Purity of Water.—The purity of the water supplied to this area is of fair standard, and there has been no reason to conclude that it has in any instance been liable to pollution.

Sewage Disposal.—The water carriage system of sewage is in use throughout the area, and by a Municipal Bye-law, every house must be connected with the Municipal sewers. The system of sewers converge to a main outfall sewer situated on the beach about the centre of the Sea Point foreshore. This outfall sewer is run out some distance into the open sea, and there empties itself. This system of sewers was put down from 1897 to 1899.

In most respects the system has admirably met the requirements of the Municipality. There has, however, been during the hot weather, and particularly on quiet days, a good deal of annoyance and discomfort felt by the inhabitants by the amount of perceptible sewer gas in the air. The erection of ventilating shafts and the putting down of frequent inlet open gratings, has not, in certain conditions of the atmosphere, been able to cope with the volumes of sewer gas successfully. It has appeared to me that the nuisance is due in some instances to a want of sufficient fall in some of the sewers, resulting in a silting up in the sewers, and further to the way in which the invert has been laid. The invert has been put down on the flat, with the result that where the inverting stream is the weaker there is a damming back of a quantity of more or less liquid sewage. To obviate these defects, which could not be remedied except at a very great expense to the ratepayers, a system of dredging has been instituted and carried on almost continuously throughout the year. This, together with the flushing—the sewers having been supplied with flushing tanks in their construction—has tended to mitigate the evil, but not to do away with it satisfactorily. The Municipality put down in December at the junction of Glangariff Road—Main Road and Three Anchor Bay Sewers—Stone and Co.'s, of London, patent sewer gas purifying apparatus. This patent apparatus, which was imported from England at the suggestion of the Municipal Engineer, is well reported upon by a number of prominent English Sanitarians, and should it prove the success it promises to be—at the sewer junction it is being tried—it will be duplicated by the Municipality at other positions in the sewer system, so as to influence the sewer gas from the whole system.

New Houses, Sewer Connections.—It has been found necessary by the Municipality to make a rule that all new connecting sewers shall, before being covered up and passed, be tested by means of the water test. This was found necessary on account of the faulty way these sewers were being put down by contractors.

Disposal of Household Refuse.—Refuse is collected from each house daily excepting Sunday by means of covered carts which convey the refuse to a tramway off the Beach Road. It is run along the tramway and tilted into the sea. During the year 6,308 loads of refuse have been collected and dealt with, and 4,350 loads of scavengings.

Covered portable dustbins continue to be supplied to householders making application.

Natives.—During the early part of the year Natives were to be seen loitering about the Municipality. To meet this annoyance and danger to the public health it was proposed by the Municipal Councillors to form a location within the Municipal area for the accommodation and proper control of such natives as were employed in the Municipality. This proposal met with considerable opposition on the part of the Ratepayers, and was

consequently abandoned. At present all the Natives employed in this area are located in the Government Locations, principally the Dock Location with the exception of a few, six or eight for whom permits have been granted in terms of the Native Reserves Locations Act. The police now have instructions to arrest any Native found loitering about the Municipality without proper and permitted accommodation.

Increase of Rats.—From complaints sent into the Municipal Office there is reason to conclude that the rats are on the increase. Rat-traps are supplied to the public. The supplying of rat-traps does not appear to be effectual in keeping down the increasing number of these pests. It would be well to adopt some other and more effectual way of destroying these dangerous animals.

Specimens of captured rats are from time to time sent to the Government Bacteriological Laboratory for examination. No Plague-stricken rat has been discovered within this area during the year.

Outbreak of Foot-and-Mouth Disease.—A telephone communication was received from the Medical Officer of Health for the Colony on the 29th April, giving the information that Foot-and-Mouth Disease had broken out at Mr. De Vries's Dairy Farm, Mouille Point. The Municipal Veterinary Surgeon in consequence of this outbreak made an examination of all the cows in the area. He found the cows free of the disease. No case of the above disease occurred among the inhabitants.

Vital Statistics.—During the year 81 deaths were registered as occurring in the area. This gives a death-rate per 1,000 inhabitants for the year of 10·8. The death-rate for 1902 was 9·5. The increased rate may very properly be ascribed to the increased population. Most probably the true death-rate for 1903 is quite as low as that for 1902.

The number of deaths of infants below 2 years during the same period was 24 or 29·7 per cent. of the deaths. Of the 24 deaths 13 were due to bowel complaints and 4 to premature birth.

The causes of death ranged as to systems, were as follows:—

Nervous System	5
Respiratory	7
Circulatory	12
Digestive	11
Urinary	9
Generative	1

Other specified causes were:—

Old Age	3
Tuberculosis	7
Cancer	3
Enteric Fever	2
Whooping Cough	2
Diabetes	1
Erysipelas	1
Congenital Deformity	1
Alcoholism	1
Chloroform Syncope	1

During the year 211 births were registered, giving a birth-rate for the year of 28·2 per 1,000. The birth-rate for 1902 was 29 per 1,000.

The births were distributed as follows:—

Europeans	169
Coloured	24
Illegitimates	18

Table I.—Showing births and deaths and rates for each month.

1903.	Births.	Birth-rate	Deaths.	Death-rate.
January	17	27·2	9	14·4
February	12	19·2	6	9·6
March	17	27·2	7	11·2
April	18	28·8	4	6·4
May	27	43·2	8	12·8
June	11	17·6	3	4·8
July	22	35·2	13	20·8
August	14	22·4	10	16·
September	23	36·8	9	14·4
October	8	9·6	5	8·
November	22	35·2	4	6·4
December	20	32·	3	4·8

It will be seen that the 3rd quarter of the year stands out as having a higher death-rate, the average being about the same for the rest of the year. The deaths during the 3rd quarter show a preponderance of deaths due to the respiratory system. The increased number of deaths during this quarter were presumably caused by climatic conditions.

Notifiable Diseases.—Thirty-eight cases were notified during the year as is shown in the following table:—

Table 2.—Showing notified diseases for each month.

	Enteric		Scarlet		
	Fever.	Fever.	Diphtheria.	Small-pox.	Erysipelas.
January	3	2	0	0	0
February	1	1	0	0	0
March	1	0	0	0	0
April	1	1	0	0	0
May	2	2	1	0	0
June	1	0	1	0	0
July... ..	2	2	0	0	1
August	2	0	1	0	0
September	1	1	0	0	0
October	0	1	0	0	1
November	3	0	0	0	0
December	2	1	2	1	0

Enteric Fever.—The incidents of this disease occurred throughout the year, but at no time in such numbers as to constitute an outbreak or epidemic. Nineteen cases occurred during the year, whereas in 1902 31 cases were notified. Of the nineteen, four were imported cases—arriving in the district sick of the disease. Seven were removed to the Somerset Hospital and two died.

One case notified and sent to Somerset Hospital was returned as Pneumonia.

The cases of Enteric were distributed as follows:—

European Males	5
European Females	6
Coloured Males	1
Coloured Females	7

In six cases the probability was that the infection was received outside the district.

In fourteen cases on examination of the premises some sanitary defect was discovered.

Scarlet Fever.—During the year eleven cases of Scarlet Fever were notified against eighteen last year. As will be seen from the table this disease was prevalent more or less throughout the year. It was impossible in most of the cases to trace the infection. I am of opinion cases occur which are never notified, no medical man being called in on account of the slighness of the attack, and are not recognised as Scarlet Fever, the rash being ascribed to heat or fruit or teething. It is by means of these unrecognised cases that the disease is spread. One case in July occurred in a dairy in Sea Point. Immediately upon receipt of the notification the dairy was closed.

Only one case was removed to the Isolation Hospital.

The incidents were:—

European Males	4
European Females	6
Coloured Male	1

Small-pox.—One case, an European male, occurred in Green Point in the early part of December. The case was removed to Rentzkie's Farm and all the contacts re-vaccinated. The case occurred in the person of an elderly mechanic in a small boarding-house. The contacts were kept under observation for 21 days. It was impossible to trace the source of infection.

Vaccination.—A small number of free vaccinations have been done in the district by the Government Vaccinator. I am of opinion that the vaccination of infants is carried out by the parents in a very loose way, many children remaining unvaccinated.

Tuberculosis.—During the year seven deaths were ascribed to Tuberculous Disease, namely: Tubercular Disease, 1; Phthisis, 4; Tubercular Meningitis, 2.

As this disease was not notified, no particulars as to its prevalence are available. A letter was addressed by me to the Council in the early part of December pointing out the desirability of making all diseases due to *Bacillus Tuberculosis* notifiable—the notification to take effect from the beginning of 1904, in terms of His Excellency the Governor's Proclamation in March, 1903.

Prevalence of other Diseases.—During the year Measles, Whooping Cough, Chicken-pox and Influenza have been more or less prevalent.

(vi) MAITLAND (MUNICIPALITY).

*Report of Dr. JOHN HEWAT, Medical Officer of Health.

1. Water-supply.—The water-supply during the past year has been more continuous than in the previous year, although much margin is still left for improvement. The supply is obtained from Newlands by leadings from there to Maitland. The source is from springs and catchment from the mountain stored in reservoir and distributed by cast-iron pipes and galvanised house leadings to the various houses.

Many of the houses, due to scarcity of supply and due to the smallness of calibre of the water main, are unable to get connections. This refers mostly to the part of Maitland known as Yzerplaas where the water has to be obtained from wells, many of which are surface wells and liable to contamination.

Those obtaining their supply of water from the Newlands Water Supply have a pure supply in quality if not in quantity. Those using

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wells, etc., have a source always liable to contamination although much is being done by the Municipal Council to minimise this danger by making systematic inspections and insisting upon sealed covers and removal of all surrounding filth.

2. Scavenging and Disposal of Excrement.—At present by an organised system of regular removals, this is collected and buried on a sandy site between Yzerplaat and Maitland proper.

The site, to my mind, is a bad one, being too near the inhabited portions of Maitland. In my opinion another site further removed should be at once selected.

House Refuse.—This is collected daily and departmentally, and deposited on a site on the Flats, and there burnt.

3. Infectious Diseases.—These have not been frequent, when one considers the population of the district. Statistics for six months give:—

Typhoid, 8; Scarlet Fever, 1; Diphtheria, 2.

Summary.—I cannot speak too highly of the good work being done by the Municipality of Maitland under great difficulties, to cope with the past sanitary defects in their midst. Two Sanitary Inspectors are now at work and nuisances as they arise are immediately attended to.

(vii) MOWBRAY.

* Report of Dr. MATTHEW L. HEWAT, Medical Officer of Health.

Population.—10,000 (figures supplied by Council).

Birth-rate.—28·9. Compared with 46·29 for 1902.

Death-rate.—19·6. Compared with 21·51 for 1902.

Births.—During the year there were registered 289 births, of which 148 were males. Of these, 103 were Europeans, 45 coloured. 141 were females, of these 85 were European and 56 coloured, that is 188 European and 101 coloured.

Of the births, 27 were illegitimate—4 European and 23 coloured.

Deaths.—During the year there were registered 196 deaths, of which 102 were males—63 over 5 years, 46 European, 17 coloured; 39 under 5 years, 20 European, 19 coloured. 94 were females—55 over 5 years, 40 European, 15 coloured; 39 under 5 years, 13 European, 26 coloured.

An analysis of the causes of death shows the following:—Measles, 0; Whooping Cough, 2; Typhoid Fever, 2; Scarlet Fever, 0; Diphtheria, 1; Diarrhoea, 7; Dysentery, 1; Phthisis, 37; Pneumonia, 12; Bronchitis, 6; Enteritis, 9; Other causes, 119.

Chest complaints total 54 deaths, and Phthisis alone accounts for nearly 20 per cent. of the total deaths, of which latter 18 were European adults and 14 were coloured adults.

Diarrhoea and Enteritis together are conspicuously less evident, owing principally to the prevalence during the usually hot months of moderate weather.

Exceedingly few deaths were due to Zymotic disease, a sure evidence of the healthiness of the Municipality.

Notification of Infectious Diseases.—The following were notified: Small-pox, 4; Typhoid Fever, 28; Diphtheria, 8; Scarlet Fever, 12; Puerperal Fever, 1. It will be seen that none of these appeared in an epidemic form, and that the precautions taken as a matter of routine on the notification of any of these have been successful in preventing the spread of the infection.

Measles and Mumps have also appeared during the year in a mild form. Influenza has been less prevalent than usual.

Taken as a whole, the year has been an exceptionally healthy one, even for Mowbray.

Vaccination.—Since the vaccination campaign undertaken at the beginning of the year, in consequence of the Small-pox outbreak, very little has been done in this matter. Something ought to be done to systematise the vaccination of the children born in the Municipality, so that at any time one can feel assured, that should Small-pox break out, most, at any rate, of the people are protected, and in this way the Council be saved a recurrence of the panic expenses incurred at the end of 1902.

The water-supply is obtained almost entirely from the Municipal Water-works.

Scavenging, disposal of house refuse and excrement, are carried out departmentally, and on the whole in a satisfactory manner.

Drainage.—More of the Municipality has been provided with surface drainage, and in some places underground drainage has been provided.

The Municipality is drained entirely into the Liesbeek River, a condition that must be altered as soon as possible, as it cannot fail to be a serious danger if carried out for any length of time, even though every effort is taken to prevent other than surface water entering these drains.

(viii) RONDEBOSCH (MUNICIPALITY).

No report furnished.

(ix) WOODSTOCK (MUNICIPALITY).

* Report of Dr. JOHN HEWAT, Medical Officer of Health.

1. The water-supply is obtained from the Rondebosch Springs and Cape Town Water-supply, the former being partly controlled but not within the area of the Local Authority.

The supply is conveyed through pipes from the reservoirs. The water is of good quality, but insufficient in quantity.

2. (a) The pail system is in vogue, and the night-soil is collected weekly and buried in trenches.

(b) Slop-water is disposed of in the drains and street channels.

(c) Household refuse is collected daily and tipped to reclaim land on the beach; the refuse is kept burning.

3. The prevalence of infectious disease has been below the average; the patients are isolated and free disinfectants supplied, as well as the premises and clothing being disinfected after convalescence.

4. Notice is given to offenders, giving time limit for the abatement of any nuisance; failing compliance, the Council institute proceedings, or otherwise execute the work, and recover the costs; over 1,000 cases were dealt with during the year.

5. Rats are, so far as we can find out, not so numerous; the Council provide traps, free of hire, and pay threepence per head for rats brought to the municipal yard.

6. A Health Officer is partially employed to advise the Council as to combating outbreaks of disease, to report upon the suitability of doubtful premises as dwellings, and generally to guide the Council on health matters.

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7. During the year much has been done to improve various parts of the town by the formation of streets, the laying down of kerb and channel and other drains so necessary for the efficient carrying away of slop-water, etc. Doubtless the greatest event of the year is the organization of a Departmental Scheme for the collection and disposal of night-soil. This work, formerly carried out by contractor on the principle of optional notification, was very unsatisfactory. The new system, costing initially near £10,000, ensured the weekly removal throughout the town. Pails are provided with hermetically-sealed lids, and collected in specially-designed vans. The night-soil is disposed of in trenches; the pails are washed and disinfected before being returned. The scheme, drafted, specified, and organised by the Sanitary Superintendent is giving fullest satisfaction.

(x) WYNBERG (MUNICIPALITY).

1. The water-supply for this Municipality is obtained from their springs at Orange Kloof Farm, and from two storage reservoirs on Table Mountain. These sources are vested in the Municipality, and are situated outside the Municipal area. The water is conveyed into Wynberg through cast-iron pipes; the supply is quite adequate and quite pure.

2. Night-soil removals are done twice a week, and excreta buried on the old Rifle Range at the foot of Ottery Road. Household and other refuse are also removed twice a week, and buried on the aforesaid site. Slop-water removals are done twice a week, and, where necessary, daily. The wagons removing the slop-water empty their contents in a catch-pit in connection with the drainage scheme, and the water is conveyed by gravitation to the Disposal Works on Plumstead Flats, where the same is properly treated.

3. The Municipality has had no serious outbreak of infectious disease. A few cases of Small-pox have occurred, but prompt measures of vaccinating all contacts and the removal of the patients to Rentzkie's Farm prevented it spreading.

Scarlet Fever is gradually on the increase; because one cannot enforce the isolation of the patients at home, they are frequently found out in the street in the desquamating stage.

Typhoid Fever was prevalent during the early part of the year, and this was traceable to a certain milk supply. Steps were taken to remedy the defects of the dairy.

No Infectious Diseases Hospital accommodation has been provided.

4. Several prosecutions have been made against landlords for overcrowding, and allowing slop-water to flow in the public streets.

5. Rats are not prevalent in this Municipality.

6. A Health Officer is employed in this Municipality, whose duties are to report on all infectious diseases occurring, and to have the general supervision of all matters pertaining to sanitation.

CARNARVON.

(i) CARNARVON (MUNICIPALITY).

1. Water-supply.—The village is entirely dependent on wells for its water-supply. Owing to the prolonged drought, every well, with but few exceptions, failed. Wells in every instance have had to be deepened at

great cost to the householders, but with satisfactory results. The Municipal wells were also deepened and enlarged, and gave a better supply of water.

2. Night-soil.—The stercus arrangements are still being carried on under the contract system. The night-soil of every householder is removed twice a week, and all house refuse once a week, to a spot situated about two miles from the village. Night-soil pits are filled up constantly with sand and ash.

3. Infectious Diseases.—There was an outbreak of Diphtheria, which can be attributed to the large influx of natives from the district during the operation of Martial Law. Every precaution was taken by the Local Authority to check its spread, and they have so far succeeded, that during the latter part of the year the disease was practically stamped out. Strict isolation was insisted upon, disinfectants supplied, and anti-toxin supplied to the poorer classes free of charge.

The Local Authority has a hospital for the accommodation of infectious diseases.

4. Washing is done at the Schutfontein River, about two miles from the village, where there is a running stream of water.

No overcrowding exists.

5. There are no rats here, except the ordinary field-mice, which have mostly died owing to the prolonged drought.

6. The Local Authority does not employ a Health Officer, but every case of infectious disease is reported without fail by the Medical Practitioners of the village.

7. The streets and outskirts of the town are being cleaned daily, and householders are supplied free of charge with disinfectants requisite for their water-closets and yards.

(ii) VAN WYK'S VLEI (VILLAGE MANAGEMENT BOARD).

1. The supply of water for the past year has been from two wells, both within the Board's area. The lower well at the village has ceased to give anything like what is required, and is hardly looked upon as a source of supply. The upper well, a little over a mile from the village, still holds out, but is empty at least twice a day—sometimes all day—and does not give a sufficient supply except for drinking and cooking purposes, and if the drought continues, may give out altogether at any time.

The water in both wells is good, in the lower brack, the upper one less so and very pure. The small supply is, however, augmented by water in the "puts" or holes (three) on private property; in these the water is still more brack but does for the stock. Both the drinking wells have covers.

2. Night-soil is carried to a place some distance below the village and furrow, and buried; slop-water, household and other refuse are also carried away from the residences, which are few, far between, and not all occupied.

3. There have been no infectious diseases.

4. No action has been necessary.

5. Rats or mice are seldom seen. The drought appears to have killed them off.

6. No Health Officer is employed.

7. The health of the area is excellent, in spite of the drought and stravation prevailing; the death-rate has been below the usual average,

CATHCART.

CATHCART (MUNICIPALITY).

1. The water-supply is derived from Farm No. 12; the supply is owned by the Railway Department and Town Council jointly, and is from springs. There are also some springs on the commonage running into the above water-course. The water is stored in reservoirs belonging to the Railway Department and Town Council; it runs in its own water-course to the town reservoir, and is then conveyed by pipes to the Railway and Town.

2. The collection of night-soil is done by contract, hotels and railway tri-weekly; dwellings bi-weekly. Slops and household refuse are also removed bi-weekly by contract.

3. No serious cases of infectious diseases occurred during the past year. There is no hospital of any kind in Cathcart.

4. The usual action under the Regulations of the Health Act has been taken when necessary.

5. There are not many rats in Cathcart. When prevalent, steps were taken to destroy them, and with great success.

6. Dr. Borchers is Health Officer, and is paid for his services when required. He has no fixed salary.

7. A new supply reservoir is being erected for the supply of water to the town.

CERES.

(i) CERES (MUNICIPALITY).

* Report of Dr. G. C. MUNNIK, Medical Officer of Health.

1. Water-supply.—Great improvement is to be recorded. It is supplied by pipes, is of excellent quality, and placed within reach of the poor.

2. The night-soil of the better classes is systematically removed outside the town. Other refuse is carried away by Municipal carts.

Slop-water is relegated to the yard.

3. Infectious Diseases.—Eleven cases of Typhoid Fever were notified. Three were brought in from a distant farm for treatment.

One case of Diphtheria occurred. No hospital accommodation exists in the district for the isolation and treatment of cases of infectious disease, with the exception of a small lazaretto belonging to the Municipality. It will accommodate about eight patients.

The Typhoid cases mentioned above were sporadic ones, and the source of infection obscure.

4. As regards overcrowded dwellings, this is dealt with in previous reports. The general sanitation of native locations still calls for strong comment. No improvement is effected in controlling the deposit of night-soil, which in some localities, takes place anywhere. Some measures must be adopted to remedy this evil, and regular inspection made.

(ii) PRINCE ALFRED'S HAMLET (MUNICIPALITY).

1. Water-supply.—The source is a river (Wagenboom's River), outside the village. The supply is conveyed in open furrows.

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2. The night-soil is buried in the gardens and used as manure. With regard to the disposal of slop-water and household and other refuse, no accommodation has been made for that purpose.

3. The open water-courses are continually cleaned out, but it is impossible to keep them entirely free from pollution.

This evil is, however, guarded against as much as possible.

The general health has been good during the year, with a few exceptions of Enteric. As yet no hospital accommodation has been provided.

6. No Health Officer is employed.

CLANWILLIAM.

CLANWILLIAM (MUNICIPALITY).

1. Water-supply.—Water is taken out of the Jan Dissel's River, about three miles distant from the village, by means of an open furrow, the whole of which is situated within the Municipal area and is under the control of the Municipal Council. The supply is adequate, the source pure, but the furrow is liable to pollution both in its course and on delivery, by cattle and sewerage etc.

2. This is disposed of by Council in most cases. Some people who have gardens prefer using night-soil as a fertiliser.

3. In the early part of the year cases of Enteric Fever occurred among the Cape Police, as well as an outbreak of Measles.

No Infectious Diseases Hospital has been provided.

4. Portion of the water furrow has been fenced in so that cattle cannot get into it, but the furrow is still liable to pollution from street drainage in wet weather, and by cattle straying into it beyond the enclosure.

5. There are, for some unexplained reasons, no rats except field rats in Clanwilliam.

6. A Health Officer is employed who is paid for any services rendered.

7. The drainage system of this village, which is rapidly increasing, is very inadequate. The matter will be receiving the Council's early attention.

COLESBERG.

COLESBERG (MUNICIPALITY).

1. The water-supply is sufficient and is derived from a spring above the town. Direct from this fountain, pipes have been laid to several hydrants in the town, and the water is used for household and drinking purposes. From the same fountain water runs down into paved furrows for the irrigation of gardens.

2. Disposal of Night-soil.—This is done by a contractor under Municipal control. All cesspools have been closed. Galvanised iron pails are in use.

Slopwater is collected daily in a good sized iron tank on two wheels and is deposited far out of town.

Household and other refuse are collected daily by two scotch carts and deposited a good distance from the town.

3. Infectious disease has not prevailed to any extent during the year. No Infectious Diseases Hospital accommodation has been provided.

4. The Commissioners do not know of any sanitary defects existing within the Municipality. Sanitary arrangements are well attended to.

5. As far as the Commissioners are aware, there are no rats in the district.

6. No Health Officer is employed, it not being considered necessary.

CRADOCK.

(i) CRADOCK (MUNICIPALITY).

1. Water-supply.—This is supplied from a spring eighteen miles distant and is brought in to the town by pipes.

2. Scavenging and disposal of excrement are carried out by the Municipality, the pail system being used between the hours of 10 p.m. and 5 a.m.

Household refuse is removed by the Municipality weekly and taken out of the town and buried.

3. Infectious Diseases.—There is nothing to report.

4. Sanitary Defects.—As far as the pollution of drinking water is concerned, this is impossible under our system of supply, the water being brought in by pipes and only seeing daylight when being tapped.

(ii) MARAISBURG (MUNICIPALITY).

1. Water-supply.—This matter is fully reported on in last year's report.

2. The System of Collection and Disposal of Night-soil, Slop-water, Household and other Refuse.—The *modus operandi* described in last year's report is still in operation and meets with the satisfaction of the Council.

3. Towards the end of November last several cases of Diphtheria were removed from Blaaskraal, in the Division of Tarka, to this village, where the Medical Officer in attendance is resident. The Municipal Council thereupon took immediate steps; quarantining the dwellings occupied by patients and contacts; procuring and supplying temporary hospital accommodation within the quarantined area; closing the local schools, and so effectually prevented the spread of the disease. There were a few deaths at the temporary hospital, but no cases have been reported since the quarantine was withdrawn.

5. Rats are not a nuisance in this village; there has consequently been no occasion for the Council to give this matter their consideration.

6. The Council does not employ a Health Officer.

EAST LONDON.

(i) EAST LONDON (MUNICIPALITY).

* Report of Dr. R. J. ROULSTON, Medical Officer of Health.

1. Water-supply.—There has been no change for the last few years. Last year the ratepayers held a public meeting to decide whether they would recommend the Council to adopt the Buffalo or the Kabusie scheme, which was then before the Council. It was decided in favour of the

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Kabusie by 385 votes to 152. At another public meeting held in February, 1903, the ratepayers agreed to get an expert to examine the different schemes, and recommend one which he believed would suit all the requirements of the town and suburbs.

This examination has been going on from the first of June, 1903. It is hoped the final recommendation will soon be in the Council's hands.

2. There is no change in the system of collecting and disposal of night-soil, household and other refuse and slop-water from last year.

3. There is a hospital for infectious diseases in good order; it has not been used for years. Most of the Enteric Fever cases are treated in the Frere Hospital.

Scarlet Fever and Diphtheritic cases are treated in the patients' homes, the houses and occupiers being isolated. At the termination of a case the premises, etc., are disinfected. I do not consider this a wise or safe system, as the houses these cases occur in are usually old, damp, and the drainage defective. It is very difficult to thoroughly disinfect an old house. There were 43 local cases of Enteric Fever notified during the year, also 19 from ships and 5 from the country, in all 67, which compares favourably with 70 of last year and 149 of the previous year.

Scarlet Fever.—Seven cases were notified, as compared with 43 in 1902.

Diphtheria.—Six cases were notified, most of them very mild.

Plague.—There were 24 cases notified which were under the control of the Plague Officers.

Measures taken to Prevent the Spread of Notifiable Diseases.—As soon as a notification is received, the Sanitary Inspector and, if necessary, the Health Officer, examine the dwelling. If the case is not removed to hospital, the Sanitary Inspector sees that the case is isolated, and as far as practicable that all precautions against the spread of the disease are taken. After the termination of the case, the house, clothing, etc., are disinfected.

4. The Sub-sanitary Inspectors make regular house-to-house visitations. When they find any accumulation of noxious matter, it is reported, when the usual notice is served on the inhabitants to have the nuisance abated in a specified time and the premises put into proper order. If not done the Municipality institute proceedings against the offenders. Overcrowding is difficult to deal with on account of the insufficient house accommodation and the high rents. The cubic space allowed for a full-grown person is 300 feet, which is, in my opinion, far too small, particularly in this country where there is no proper draught in the bedrooms, chimneys being an unknown quantity and sanitation in its primitive state.

Auction Marts.—These sale rooms are regularly visited, and the foodstuffs examined. In the event of any being found unwholesome, it is seized and proceedings taken against the seller or auctioneer as the case may be. Owing to the frequent convictions during the year, I am happy to say more care is exercised in offering food stuffs for sale. Tinned foods and cheese are the articles most frequently found damaged, and are, in my opinion, responsible for a considerable amount of disease among the working classes.

The market is regularly visited.

Milk Supply.—There are several dairies in town; our principal supply comes by rail. Two years ago I induced one of our merchants to import the plant for sterilizing milk, which he did. Owing to an accident of fire it was destroyed.

Bakeries.—All the bakeries which cater for the Europeans are kept in fairly good order; some which provide for Kafirs require close attention.

Gutters.—I am happy to say all the new gutters are laid down in concrete and have a smooth surface which offers the least possible re-

sistance to the flow of water and slops; the old one in the North End requires attention.

Slops.—Two years ago our City Fathers agreed to adopt a temporary slop removal system. I am sorry to say, for some reason or other, they have changed their minds and consequently it is still a dead letter.

Duplicate Bucket System.—For the past four years I have strongly advocated the introduction of the duplicate system. It passed the Council, but has not assumed a practical form.

Plans.—Since the 11th May, 1903, all plans are submitted to the Medical Officer of Health. During the year 471 plans have been examined and approved and 52 not approved. I regret to say the Council passed some plans which may cause serious trouble later on.

Dust.—The Salt Water Scheme for watering the streets is fairly well advanced. I hope when completed it will not only be successful in keeping down the dust but also in flushing our sewers. This should not only add to the health of the town but to the comfort of the inhabitants.

5. Rats.—During the first four and a half months of the year 5,411 rats and 2,421 mice were destroyed, which cost the Municipality £145 15s. 10d. On the 20th May, 1903, the Plague Board took over full control of this department from the Council.

6. A Health Officer is appointed by the Council. Specified duties are allocated to him, which he is expected to carry out.

(ii) AMALINDA (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—Rain-water is collected in tanks, and many farmers have large wells. The village is a small one, and as yet a reservoir has been unnecessary.

2. Disposal of Night-soil.—This is removed only between the hours of ten o'clock at night and four o'clock in the morning, and is deposited at such a place as is set apart for that purpose by the Board from time to time.

3. Infectious Disease.—Nil. No hospital accommodation is provided within the area.

4. Remedying of Sanitary Defects.—Regulations 13, 14, and 15 read as follows:—"No person shall permit any building of which he is occupier or owner, or over which he has legal control, to become so overcrowded as to be the cause of propagating any contagious or infectious disease, or otherwise to be prejudicial to the public health. Any person convicted of violating this regulation shall be liable, upon conviction, to such penalty as the Magistrate shall inflict." This regulation has not yet been promulgated.

5. There are very few rats in this area.

6. No Health Officer is employed.

7. The area is at present in a healthy condition.

(iii) CAMBRIDGE (MUNICIPALITY).

* Report of Dr. K. B. ALEXANDER, Medical Officer of Health.

1. Water-supply.—There is no supply under the control of the Local Authority. This community is entirely dependent for its supply on rain water, which is collected off the roofs of houses either into cemented underground tanks or galvanized iron tanks above ground, the latter being principally used.

During the past year the rainfall has generally been sufficient to meet ordinary domestic requirements, except for a short period at the latter end of September, when water in the district was very scarce after a three months' drought.

In view of the rapid development of Cambridge, and the possibility of a prolonged drought occurring, the question of a regular water-supply is the most important which the community has to consider.

2. Night-soil is collected from every house once a week and buried at a site selected at some distance from the town.

Household and other refuse is treated in a similar manner.

Slop-water is not collected separately; in some instances it is collected with the night-soil, but, as a rule, it is drained or thrown over the gardens, which does not at the present time constitute a nuisance, as there is plenty of space between adjoining houses.

3. Infectious diseases have not occurred to any extent during the past year.

There has been one case of Diphtheria which was treated by isolation and proved fatal. Two cases of Scarlet Fever occurred, and five cases of Enteric Fever, four of which cases occurred simultaneously at the Convent amongst the Nuns. All these cases were removed to a dwelling-house set apart for nursing, and every precaution taken to disinfect and dispose of excreta and soiled linen, etc., with satisfactory results.

In case of any outbreak of serious infectious disease there is a lazaretto belonging to the Municipal Authority, which would temporarily meet any emergency.

4. It has not been found necessary to adopt other sanitary measures beyond those mentioned.

5. There has been no prevalence of rats in the district. At the latter end of May two dead rats were discovered in a case in one of the sheds at the Railway Station, the cause of death being reported as Plague from the head office at Cape Town. The East London Plague Board, on being notified, immediately took active measures, and no further dead rats have been discovered.

6. A Health Officer was appointed by the resolution of the Municipality at a salary of £10 10s. per annum.

7. There is nothing further to report on sanitation. The town is a residential suburb of East London; it is scattered over an extensive area, and there is no overcrowding of dwelling houses; consequently the public health is extremely good, and the sanitary measures adopted are all that are required at the present time.

FORT BEAUFORT.

(i) FORT BEAUFORT (MUNICIPALITY).

*Report of Dr. W. DUNCAN MILLER, Medical Officer of Health.

1. Water-supply.—The water-supply of the town is from the Kat River, and during the year has been fairly adequate. It has to be noted, however, that in times of drought when the river flows feebly, very little water, or none at all, can enter the town. From the intake, about six miles from the town, the water is conveyed by means of an open furrow to the small reservoir and the filter beds within the Municipal area and

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nearly a mile from town. From that point water for domestic use is conveyed by iron pipes and distributed to the houses. For general cleansing purposes and for irrigation of garden ground, water is distributed by means of open furrow. From the intake on the Kat River to the filter beds, the water running in open furrow through the commonage is very liable to pollution by Natives and by cattle, sheep, goats and ostriches. The source of the water-supply is not under the control nor is it the property of the Municipal Council, and it is situated outside the area of the Council's authority. The water-supply in times of drought is unfortunately far from being adequate. It has been proposed by the Council to carry through a water scheme which will include a dam across the Kat River at the intake, and iron piping for conveying the water from the intake to the town.

Such a scheme would do away with all the objections to the present water-supply, and would give to the inhabitants of the town a copious and a pure supply of water.

2. There is no system of collection and disposal of night-soil within the Municipality. Many of the houses still have large cesspits in their immediate vicinity—pits which have not been cleared out for years—and which are consequently a constant menace to the Public Health. The bucket system of dealing with night-soil is gradually making progress, but in my opinion the Local Authority should insist on some uniform system of bucket earth-closets throughout the town. The disposal of slopwater and household refuse is left entirely to the householders themselves.

3. There had been a serious outbreak of Small-pox within the area of the Municipality and the commonage during the latter half of last year. Forty-six cases in all were dealt with, and of these two died—one European and one Native. There were three European cases in all.

Two cases of Enteric Fever and one of Diphtheria were reported. The Council have erected two huts outside of the town, which were intended to be used in the event of any spread of Plague to the town. The huts could be made use of for general infectious cases in the meantime should necessity arise; otherwise there is no proper Infectious Diseases Hospital accommodation.

In view of the extension of the railway to the town, a Cottage Hospital with a small wing for infectious cases would be of great advantage, as meanwhile there is absolutely no accommodation beyond the inadequate and unsuitable Gaol Hospital for cases of accident and sudden illness.

4. The Council has, upon several occasions, prosecuted householders for breach of the Municipal Sanitary Regulations during the year. The Council's Sanitary Inspector, upon whose reports these prosecutions were carried out, has made regular inspections throughout the town. One house, on the Medical Officer's report, was closed as unfit for human habitation, and two or three shanties were destroyed on the outskirts of the town after the Small-pox epidemic.

5. Rats are still prevalent within the area of the Local Authority. Early in the year steps were still being taken by the Local Authority and by private individuals for the extermination of rats, but as the probability of a visitation of Plague receded, efforts were relaxed and rats are now as prevalent as they have ever been.

6. A Health Officer is employed by the Local Authority. His duties are to make inspections and furnish reports as often as may be required by the Council, to advise the Council on matters relating to the sanitation and public health of the town, and to superintend, as far as may be required, the carrying out of the Council's Sanitary Regulations. His remuneration is £30 per annum.

(ii) ADELAIDE (MUNICIPALITY).

* Report of Dr. WILLIAM DAVIDSON, Medical Officer of Health.

1. Water-supply.—Up to the present there is no water-supply for the village, the inhabitants depending for their water on the rainfall, which is conserved in tanks, and when this fails they have to fall back on the river water, which in dry seasons is not fit for human consumption.

During the year we have had a fair amount of rain so that water was not so scarce as in several previous years, and the river water, in consequence, was of better quality, and this showed itself in a marked degree by the absence of any epidemic of Enteric Fever. A water scheme has been spoken of for many years past, and at last will be carried through, Government having granted the required amount of money.

2. No drainage system exists; cesspools receive and conserve excrement and sewerage, and when these cesspools are full, they are, in most cases, filled in and fresh ones made. Night-soil and slop-water are, in most cases, thrown into the cesspools, and household and other refuse are in most cases, thrown into a heap in a corner of the yard, and when this accumulates it is then taken out of the village and deposited at a place set apart for the purpose.

3. There have been no cases of Diphtheria or Small-pox in the village or district during the past year and only a very few isolated cases of Enteric Fever. Whooping Cough was prevalent in the Native Location a few months ago. No steps have been taken by the Local Authority for dealing with any outbreak of infectious disease, except in the case of Small-pox, when those infected are removed to the Lazaretto out of town.

4. The Local Authority has seen that all yards are kept clear of refuse. Overcrowding does not exist in the village.

5. So far, rats have not found their way to Adelaide.

6. A Medical Officer of Health is employed by the Local Authority, but when appointed, no fixed conditions were mentioned, the Medical Officer attending to any matter when requested by the Board.

(iii) BLINKWATER (VILLAGE MANAGEMENT BOARD).

With regard to water-supply, sanitation and contagious diseases, matters are about the same as in the past year. Owing to abundant rains the water-supply has increased and is fully up to the wants of the village.

Sanitation is in the same state as reported last year. There has been a slight attack of Small-pox—principally amongst children. On the outbreak of the disease, the matter was put into the hands of the District Surgeon, who quarantined the houses which were infected. The disease has been wholly stamped out owing to the energy and efficiency of the medical men.

(iv) HEALDTOWN (VILLAGE MANAGEMENT BOARD).

There is nothing further to add to previous reports.

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FRASERBURG.

(i) FRASERBURG (MUNICIPALITY).

*Report of Dr. P. J. MADER, Medical Officer of Health.

1. Water-supply.—The water-supply is derived from a spring and bore-holes. It is under the control of the Local Authority, and is situated within the Municipal area. For domestic purposes it is ample. The water is not collected but pumped up when required. The surplus runs down in an open furrow through the town and is used for irrigation when sufficient, but last year the surplus water amounted to very little and would scarcely run down the furrow.

2. The night-soil is collected in buckets, and the disposal is under the supervision of the Sanitary Inspector. Buckets ought to be emptied systematically, but there is great carelessness in this respect. Slopwater is disposed of in back yards and household refuse is removed in the Municipal cart.

3. During the year the town was remarkably free from infectious diseases. An outbreak of Diphtheria occurred in one European family. Nothing is done by the Local Authority for the prevention of outbreaks of such diseases. There is no Infectious Diseases Hospital.

4. Some objectionable huts situated near the fountain have been closed. Otherwise nothing has been done by the Local Authority to remedy any sanitary defects or to limit the occurrence of preventable disease.

5. Rats are not prevalent in Fraserburg.

6. A Health Officer is employed by the Local Authority at a salary of £18 per annum.

7. Matters under this heading are dealt with in the District Surgeon's Annual Health Report for 1903.

(ii) WILLISTON (MUNICIPALITY).

1. Water-supply.—Water for this community is supplied by a spring and a well, both of which are under the control of the Local Authorities. The water of the spring is collected by means of an Aermotor pump. The supply is quite adequate for the wants of the village, and the water is pure and not liable to pollution.

2. Night-soil, etc., are removed to cesspools about a quarter of a mile from the village.

3. With the exception of two cases of Diphtheria no infectious disease has prevailed in the village.

5. No rats have been found in the area of the Local Authority.

6. The Secretary of the Municipality acts as Sanitary Inspector at a salary of £2 10s. per mensem for both offices.

GEORGE.

(i) GEORGE (MUNICIPALITY).

1. Water-supply.—There was a sufficient supply of water throughout the year conveyed to the town partly by pipes and partly in open furrows.

2. Sanitation.—The system of tubs is still in vogue. The night-soil is utilised for garden purposes. A Municipal cart is at the service of any householder for the removal of kitchen refuse.

3. There has been no epidemic of infectious disease, but sporadic cases of Diphtheria and Enteric Fever have been notified to the Town Council by the Medical Practitioners of the town. The following cases have been notified:—Scarlet Fever, 8 Europeans, 6 coloured; Diphtheria, 5 Europeans; Enteric Fever, 3 Europeans; Leprosy, 1 European.

The cases were isolated as far as possible and contagion prevented.

4. Pigsties and slaughter-houses, when reported to the Town Council as in an unsanitary state, were at once ordered to be properly cleansed.

7. The general health of the town has been very good and the climate favourable to longevity.

(ii) PACALTS DORP (VILLAGE MANAGEMENT BOARD).

1 and 2. There is nothing to add to previous reports.

3. A few cases of Diphtheria occurred during the months of June and July and immediate steps were taken to isolate houses infected. These houses, together with all houses in the immediate neighbourhood, were thoroughly disinfected by fumigation and washing with lime, where possible, both inside and out. There is no Infectious Diseases Hospital.

4. No action was taken further than that reported in 3.

5. House rats are extinct.

6. No Health Officer is employed.

GLEN GREY.

LADY FRERE (MUNICIPALITY).

1. The main water-supply is from springs situated without the area of the Local Authority and is conveyed by means of an open furrow. The supply is inadequate and liable to pollution.

2. The system of collection and disposal of night-soil is at present in the hands of the inhabitants, very many of whom use cesspools.

3. There has been no outbreak of infectious disease within the Municipality during the last twelve months.

4. The rules and regulations for the Municipality are not yet passed, so that action has not been taken in respect of sanitary defects. But owing to the dwellings being so scattered little fear is felt of any bad result from the sanitary system now in vogue. Steps have been taken to improve the water-supply. Pending the construction of permanent water-works boreholes have been put down to secure a pure supply of water for household purposes.

5. The few rats in existence are in stores and are well kept down.

6. The District Surgeon is employed when necessary.

GORDONIA.

UPINGTON (MUNICIPALITY).

* Report of Dr. EDWARD H. PHILLIPS, District Surgeon.

The general health of the village has been very satisfactory, infectious disease having been practically non-existent, a wonderful record in a village where the only water-supply is a water furrow liable to all the fouling which must obtain where drainage is unknown, and where, despite the

utmost vigilance of the Municipal Authorities and the existence of an excellent set of bye-laws, the native population still persists in depositing its excreta anywhere, everywhere, and at all times.

1. Water-supply.—A water furrow, derived from the Orange River, of good breadth and with a good current, running some miles before entering the village, forms an adequate supply as to quantity, although the quality of the water leaves much to be desired.

The whole furrow is under the authority and control of the Upington Waterworks Company, Limited, and although cleaned out at fairly regular intervals, it is far from being an ideal water-supply owing to the fouling above mentioned.

During the latter months of the year, owing to the extreme drought, the Orange River ceased to flow and the water-supply was drawn almost wholly from stagnant pools in the river bed and from wells sunk near the margin of the river. The Municipality, by means of a stringent bye-law, kept the pools of water as fresh as possible, interdicting all promiscuous washing and bathing in them, under penalty of a heavy fine, until the river came down in flood again, which it did on December 28th. This action on their part in such a serious crisis, as well as the boiling of the water adopted by all classes on the advice of the District Surgeon, did much to check sickness, which was indeed conspicuous by its absence at this time. With the exception of a few cisterns connected with pumps below the furrow, erected by private enterprise, there is no provision for water storage and distribution in the village.

The pollution of the furrow by excreta is, perhaps, not so marked now as in former years, owing to the erection of public water-closets by the Municipality for the use of the coloured population; it is, however, polluted in many other ways, *e.g.*, its use as a drinking place for all kinds of animals, horses, sheep, cattle, dogs, etc.

2. (a) Night-soil is collected in the village proper by the pail system, the pails being emptied and cleaned at regular intervals by the Municipal Authorities. The excreta are deposited on the veld at some distance from the village in a convenient situation.

(b) and (c) No system exists.

3. Upington has been singularly free from the ordinary infectious diseases, such as Enteric, Diphtheria, Measles, Scarlatina, etc., during the year.

Syphilis has been more in evidence, thirteen new cases coming for treatment under Part II. of "The Contagious Diseases Prevention Act, 1885," as against three only in the previous year. Steps are now being taken to build a Lock Hospital in the village, half the expense to be borne by the Municipality and half by the Government. It is hoped that the spread of this disease will be checked by the better supervision which will be attained by the erection of what has been a long felt want. The present method of treating such cases as "out-door" patients is not encouraging.

4. A lay Sanitary Inspector has been employed during the year to inspect and report any sanitary defects in the village and native location.

Overcrowded dwellings exist in the location, which is liable to become a focus of disease, and, in the event of an outbreak of an epidemic, will surely prove a menace to the health of the village. Steps have been taken during the year to keep the huts more tidy.

With regard to the pollution of the water-supply, it is difficult to know what to do to ensure its purity. The steps taken, as stated above, to guard the water-supply during the great drought in the latter months of the year, were carried out promptly and efficiently by the guards appointed by the Authorities.

Slop-water, household and other refuse are dealt with very inadequately and by private enterprise only; the advisability of the adoption of some such system of removal, as is indicated, for example, in the District Surgeon's Health Report for 1902, will occupy the attention of the Municipality shortly.

5. No rats are found in this district.

6. No Medical Officer is employed. It is proposed to employ one shortly.

(ii) KEIMoes (VILLAGE MANAGEMENT BOARD).

No report furnished.

GRAAFF-REINET.

(i) GRAAFF-REINET (MUNICIPALITY).

*Report of Dr. T. M. KEEGAN, Medical Officer of Health.

1. During the past year practically nothing has been done to improve the water-supply of this town. The only thing done was to pump water from the well sunk in the river bed about 200 yards above the upper end of Cradock Street into the lower furrow. This was done at short intervals during the drought when the water-supply from the culvert and furrows was wholly inadequate to serve for the needs of irrigation and for domestic purposes. The water was raised a height of eighteen feet by a rotary pump driven by a steam engine, and it was found that it was possible to pump continuously day and night for a week with a six-inch draw pipe without exhausting the well. This shows that even in severe drought an abundant supply of subterranean water is available at a very small expense.

2. The method of disposal of night-soil, slop-water and household refuse remains the same as mentioned in the last report, with this exception, that there has been no further introduction of pails, and in some few cases pails have been replaced by cesspits.

3. The town on the whole has been remarkably free from infectious disease. There were twelve cases of Small-pox. These and all contacts were isolated at the Lazaretto, a distance of $1\frac{1}{2}$ miles from the town. The disease in every case ran a mild course and there was no mortality.

Plague made its appearance among the rats and mice, but did not extend to the European or coloured population.

There were ten cases of Enteric Fever notified, twenty-eight of Scarlatina, and eight of Diphtheria. In every case all possible steps were taken as far as practicable to isolate the cases and prevent the spread of the disease. There is, however, no improvement in the hospital accommodation for infectious diseases and the only place available for such cases is the isolation ward at the Midland Hospital.

4. Nothing has been done in this respect.

5. Rats and mice are by no means abundant in the town and district. Immediately on the outbreak of Plague in Cape Town a reward was offered by the Town Council for every rat or mouse brought to the Town Office. This regulation, which still remains in force, has resulted in diminishing considerably the number of rats and mice in the town.

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(ii) ADENDORP (MUNICIPALITY).

* Report of Dr. JOHN L. RUBIDGE, Medical Officer of Health.

1. Water-supply.—The source is from a spring in the bed of the Sunday River, about two miles below the town of Graaff-Reinet. The spring, on being traced up, will be found to be the surplus water from the Graaff-Reinet supply, which appears and disappears at intervals in the sandy bed of the river.

The water is frequently polluted below Graaff-Reinet by soakage from cesspits which are very common in that place, and by washing of clothes done by coloured women in the pools in the river bed below that town.

The source is under the control of the Graaff-Reinet Authorities, but I believe Adendorp Municipality has certain rights which are partly disputed by Graaff-Reinet as it is within their boundary. The water after leaving the river is carried in an open furrow about three miles and distributed in this way to the erf-holders—another source of pollution.

There is no form of storage, no pipes and no masoned furrows.

The supply is certainly inadequate during the annual drought.

I should strongly advise that samples of the water be sent up to Cape Town for analysis taken at different points in the course as also at different times of the year.

2. Nil.

3. During the year four cases of Amaas occurred with one death. The erf on which the outbreak occurred was well isolated and the inmates and contacts not allowed to leave until all had fully recovered.

Other diseases such as Measles, Scarlatina, and Enteric occurred, but were not reported.

There is no form of hospital accommodation.

4. The Sanitary Inspector has somewhat reduced the over-crowding of coloured persons by warning them of the penalties of the law.

A public vaccination was authorised by the Municipality, when over 230 persons were vaccinated.

The isolation of all concerned—*i.e.*, cases and contacts—at the time of the outbreak of Amaas was very well and efficiently carried out, as also the disinfection of the premises when all were discharged.

5. The Municipality offered a reward of 3d. a piece for the destruction of rats, and a halfpenny for mice, with the result that about 1,000 rats and mice were brought in.

6. A Health Officer is employed. The conditions are that there is no fixed salary, but that the Health Officer be sent for when required and paid for each service separately.

(iii) NEW BETHESDA (MUNICIPALITY).

1. The Water-supply is derived from a spring. It is distributed in an open furrow and is liable to pollution. The supply was not adequate during the severe drought. Wells of various depths from ten to thirty-five feet are used by about a third of the inhabitants.

2. No proper system has as yet been introduced.

3. One case of Puerperal Fever and one of Typhoid were reported, and steps were taken to disinfect the premises.

4. The pollution of water, accumulation of filth and overcrowding of dwellings are strictly prohibited. The Town Overseer and Constable give these matters their attention.

5. Rats are not very numerous and no steps are taken for their extermination.

6. No Health Officer is employed. The District Surgeon and Dr. Henderson attend to matters Municipal when necessary.

7. The District Surgeon was employed to inspect all dwellings occupied by natives, and a person appointed to superintend the cleaning and disinfecting of all such dwellings and premises.

Diarrhoea was extremely prevalent during the last fortnight and quite inexplicable.

GRIQUALAND.

KOKSTAD (MUNICIPALITY).

* Report of Dr. A. J. H. THORNTON, Medical Officer of Health.

In presenting my annual report upon the health and sanitation of the urban area of Kokstad, the main subject to be alluded to is the epidemic of Small-pox which swept through the town-ship and lingered in it for so many months.

1. Water-supply.—This remains as in former years. No further steps have been taken to formulate a scheme for piping the water, though, as I have annually pointed out, in my opinion such a scheme is urgently needed, which need will be more and more emphasized with the growth of our town and the increase in its population. A large extent of new culverts and furrows has been made during the year. The supply of water is sufficient for all purposes, and its purity, at its source, cannot be improved upon, but the sources of contamination during its distribution through open furrows in the town are innumerable.

2. System of Scavenging and Disposal of Excrement.—No change has been made in this matter. The night-soil removal service is efficient, and the European population is well served in this respect. At present, however, it is not compulsory upon householders to avail themselves of it, though I understand a new bye-law is about to be passed, which will remedy the matter and render the service second to none.

Household and other Refuse.—The accumulation of such refuse upon private properties is forbidden and sites for its disposal are set apart upon the commonage well away from human habitation.

3. Prevalence of Infectious Diseases.—So far as Small-pox is concerned, this is dealt with in my report as District Surgeon. Of other such diseases there were, during the year, nine cases of Enteric Fever, seven of which originated in the town and two were imported from Maritzburg; none were fatal. There were two cases of Diphtheria, one being fatal—the fatal result being due, probably, to delay in obtaining active antitoxin, the supply in stock being too old. There were numerous cases also of Whooping Cough and Chicken-pox, the latter disease existing in the township side by side with Small-pox, and making a differential diagnosis sometimes difficult. No Infectious Diseases Hospital has yet been provided, but a scheme for providing such is contemplated.

4. The Municipal Council has always shown itself to be most desirous of doing all in its power to remedy sanitary defects and to deal with preventable disease. The Sanitary Inspector is most energetic and painstaking in the execution of his duty, which includes the supervision of the night-soil removal system; attending to the cleanliness of the streets and

* Forwarded by Municipality for publication.

their repair; the prevention of accumulations of filth and refuse upon private or public property; the prevention of the pollution of the water-supply, so far as possible; the disinfection of places where infectious diseases have occurred and the supervision of quarantine where such has been imposed. He also makes constant visits to the slaughter-houses, of which there are two, situated outside the township, and sees that they are kept clean and sweet, and performs similar duties with respect to the dairies and bakeries. The question of dealing with overcrowding of dwellings has so far not been dealt with seriously, and is by no means a pressing matter here.

5. Rats.—These rodents are not specially prevalent here and no steps have been taken officially to exterminate them. No disease amongst them has been brought to my notice.

6. A Borough Medical Officer of Health is employed by the Municipality at a small annual salary. His duties are to deal with epidemics of infectious disease, to advise the Council on sanitary matters and to supply advice and medicines to the labourers employed by the Council.

7. General.—During the year there were 105 births and 84 deaths, the causes of death being given in the attached table.

No cases have been dealt with under Part II. of the Contagious Diseases Prevention Act, but numerous cases of both Syphilis and Gonorrhœa have been dealt with privately by myself and the private Medical Practitioners of this town. The Act above referred to has, I believe, been proclaimed here, but has never been put into force, and no machinery exists for the purpose. In view of the fact that this is a garrison town, inhabited largely by Griquas—a large proportion of the females being prostitutes—in my opinion a Lock Hospital should be established, and the provisions of the Act stringently observed.

Table Showing Causes of Death.

1. Diseases of the Respiratory Tract:—	
Phthisis	7
Bronchitis (Acute)	3
Pneumonia	5
Pharyngitis (Acute)	1
2. Diseases of the Digestive Organs:—	
Gastric Catarrh	1
Gastro Enteritis	4
Tabes Mesenterica	6
Atrophy of Stomach	1
Hepatitis (Acute)	1
3. Diseases of the Blood and Blood Circulatory Apparatus, and of the Urinary Organs:—	
Valvular Disease of Heart	3
Chronic Bright's Disease	7
Anæmia	1
4. Diseases due to Specific Organisms:—	
Leprosy	2
Meningitis	2
Peritonitis	2
Small-pox	3
Dysentery	2

Simple Continued Fever	1
Diphtheria	1
Puerperal Fever	2
Acute Rheumatism	1
Syphilis (Congenital)	1
Erysipelas	1
Scurvy	2
Pertussis	2
5. Other Causes of Death:—	
Convulsions (originating causes not given)	11
Accidents	3
Debility	2
Abortion, Hæmorrhage	2
Cancer	1
Senile Decay	2
Suicide by Strangulation	1

HANOVER.

HANOVER (MUNICIPALITY).

1. Water-supply.—The town supply is procured from a spring situate about a mile beyond the town limits, the source being within the area of the Local Authority. The water flows free from the spring in a covered stone furrow to a point to the west of the town, from where it is distributed to the gardens in open furrows through the town. The supply in ordinary times is adequate, but owing to the present drought the supply is greatly diminished. The water is perfectly pure, and so long as it flows through the covered furrow is free from pollution.

2. (a) Night-soil.—This is removed by a contractor, each pail being emptied once a week and the contents buried in trenches one and a half miles from the town.

(b) Slop-water is removed by owners or occupiers of houses.

(c) Household and other refuse are removed by a contractor every day and deposited to the east of the town.

3. There have been comparatively few cases of any infectious disease; such have been treated in the houses occupied by the patients. There is no Infectious Diseases Hospital.

4. The District Surgeon has made inspections and reported to the Council any sanitary defects that were found to exist, and the Council has dealt and is dealing with these cases under their regulations.

5. No rats have ever been found in this town.

6. The Council does not employ a Health Officer. The District Surgeon is generally requested to make reports when necessary.

HAY.

(i) GRIQUATOWN (VILLAGE MANAGEMENT BOARD).

No report furnished.

(ii) POSTMASBURG (VILLAGE MANAGEMENT BOARD).

No report furnished.

HERBERT.

DOUGLAS (VILLAGE MANAGEMENT BOARD).

1. The water-supply of the village is mainly derived from a well sunk on the Market Square, and from which good pure water is obtained and is not liable to pollution.

2. Same as last year.

3. Infectious diseases have not greatly prevailed. There is no hospital accommodation for same.

4. No complaints on this point.

5. It is not necessary to take steps in this matter as rats are not prevalent in this district.

6. No Health Officer is employed.

7. There is one matter relating to health that certainly should be improved, and that is the manner of cleansing the irrigation furrow. At present the mud and refuse are thrown on to the banks and there left to dry, and during the process emits anything but a pleasant aroma. In very hot weather it is certainly not conducive to the health of the village.

HOPE TOWN.

(i) HOPE TOWN (MUNICIPALITY).

1. Water-supply.—The water-supply is obtained from springs which have been opened by tunnelling. The water is brought out in pipes, and at the exit of these pipes the local people obtain their water by sending for it. The excess water is allowed to collect in an open dam, from whence it is led to the several water-erven in open furrows. The supply is adequate and pure and being closed is not liable to pollution. These springs are situate in the village itself.

2. (a) Night-soil.—The night-soil is removed from each house at least twice a week in pails and conveyed to a spot outside the village and buried. (b) The same is done to slop-water. (c) Refuse is dumped by each household on spots which are set aside for such purpose, and then from time to time burned.

3. Infectious diseases are of rare occurrence in the village. There have been only two cases of Diphtheria, and two of Scarlatina. No Infectious Diseases Hospital has been provided, but when any cases of infectious disease have appeared, the Municipality have always taken steps to have complete isolation under direction of the medical attendant.

4. The usual regulations of the Public Health Act are in force in this Municipality, and enforced wheresoever found necessary; one or two convictions have been obtained for breaches thereof during 1903.

5. No rat to my knowledge has been seen in the Municipality.

6. No Health Officer is employed. There is a water-bailiff, street-keeper, etc., whose duty it is to see that nothing takes place with regard to pollution of water, deposit of dirt, neglect to carry out contract as regards disposal of night-soil, and it is left to him and the Secretary to see that nothing endangering the public health occurs.

(ii) STRYDENBURG (VILLAGE MANAGEMENT BOARD).

1. The supply of water is at present not copious and is lessening daily owing to the prevailing drought. It is derived from wells, and the underground source is principally from the north-east,

A well has been sunk beyond the village at the foot of an elevation or rand, and water found at a depth of 30 feet proved to be excellent, although not sufficient for all wants. This is a good augury for a much greater supply of water if further wells are dug, a measure which is in contemplation. The well is within the area and under the control of the Local Authority. Water is collected by means of wind pumps into reservoirs. The supply on account of the severe drought is very limited and inadequate for irrigation, and the water, if the wells are not daily cleaned, is liable to pollution, otherwise it is considered fairly good.

2. The collection and disposal of night-soil, household and other refuse continue to be accomplished by contract.

3. Since the Typhoid epidemic during the latter part of 1897, no infectious disease has prevailed. No particular steps have been taken to prevent and deal with outbreaks thereof, other than keeping the village in a perfectly sanitary state of cleanliness. Infectious Diseases Hospital accommodation has not been provided.

4. No further particular action has been deemed necessary to remedy any sanitary defects. No accumulation of filth and noxious matters and overcrowding of dwellings are tolerated.

5. No rats exist here.

6. A Health Officer has been employed by the Local Authority to see after the location and yards, etc., but as he has resigned his office another will have to be appointed.

7. No carcasses are allowed on the village commonage without being duly buried in accordance with regulation.

HUMANSDORP.

(i) HUMANSDORP (MUNICIPALITY).

1. Water-supply.—No alteration since last report.

2. The same as reported last year.

3. Several cases occurred of Natives suffering from Small-pox who were intercepted when passing through Municipal limits, all of whom were successfully isolated and cured. A lazaretto has been provided to meet such emergencies. No local outbreak occurred.

4. No alteration since last report.

5. No rats exist in the neighbourhood.

6. The District Surgeon acts as Health Officer. No special conditions are attached to his appointment.

7. The general state of health and sanitation in the area is satisfactory. There is nothing worthy of special report.

(ii) HANKEY (VILLAGE MANAGEMENT BOARD).

1. The water-supply is derived from the Klein and Gamtoos River, which pass through the village. The water is pure and good, and is conveyed in open sluits.

2. Night-soil, slops, etc., are simply thrown away.

3. No infectious disease has prevailed during the year.

4. No action has been taken to remedy any sanitary defects.

5. There are no rats in our village.

6. There is no Health Officer.

JANSENVILLE.

JANSENVILLE (MUNICIPALITY).

- 1, 2 and 4. As last reported.
3. Small-pox prevailed in the earlier part of the year in the native locations, but is now stamped out. A lazaretto was erected for Small-pox patients.
5. No rats were found in the district of the Local Authority.
6. No Health Officer is employed.

KENHARDT.

KENHARDT (VILLAGE MANAGEMENT BOARD).

1. Nothing has been done by the Board for the improvement of the water-supply or the sanitation of the village during the year 1903. The water is supplied from village wells, which have been medically condemned time after time.

To bring water from Klein Driekop wells (the nearest fresh water wells) would cost more than the village would be able to pay. The help of the Government has therefore been requested in the carrying out of this object.

2. The night-soil is taken 400 yards below the pound kraal and is buried there.

3. The sanitary condition of the village is fairly good.

The Contagious Diseases Hospital, which stands on a hill on the south side of the village, has been repeatedly condemned by medical men. However, nothing has been done towards amending the risk caused by its position. The ground it stands on belongs to Government and is outside the surveyed area of the village.

KIMBERLEY.

(i) KIMBERLEY (MUNICIPALITY).

1. The town is supplied with water by the Kimberley Waterworks Company (Limited), the source of supply being the Vaal River, which is beyond the area controlled by the Borough Council. The water is filtered before delivery, stored in reservoirs and conveyed by pipes to the consumers. The supply, except in times of extreme drought, is ample; the water is pure and care is taken to guard against the pollution of the river in the vicinity of the intake.

2. The system of collection and disposal of night-soil, slop-water, and household and other refuse is as follows, viz. :—

(a) Night-soil is deposited in pails and removed by contract every forty-eight hours, the depositing site for same being beyond the Borough limits and nearly four miles from the centre of the town. For removal, iron tanks are used, the empty pails being stored in a box on the front of the vehicle; spilling of the contents along the line of route is thus obviated. The night-soil is buried in trenches, the depth of which must not exceed 3 feet 6 inches. The buckets are washed by hand and tarred, but for a few months the latter process was stopped; this has, however,

been resumed, as it was evident that it effectually prevented many leakages caused through the considerable amount of handling to which the buckets are subjected.

(b) Slop-water is removed departmentally and carted to a pipe sewer, which is efficiently trapped and ventilated, and conveys the same to an irrigation site nearly three miles from the centre of the town. The removal of slop-water is not compulsory, but the improper disposal of same renders householders liable to a heavy penalty. About 28,000 gallons are removed daily.

(c) Household refuse is also removed departmentally, there being a weekly service from private premises and daily from hotels and several business premises. It is conveyed by rail to a site about four miles from town, where every endeavour is made to reduce its bulk and offensiveness by continual burning. About nine small railway truck-loads are removed from the town daily. Dead animals are removed immediately upon the notification of such, and buried by the Council's servants at a site specially set apart for such purposes about two miles from the town.

3. The administrative measures necessary upon the occurrence of infectious disease within the Borough of Kimberley are under the direct control of the Medical Officer to the Board of Health.

4. During the year ending 31st December, 1903, over 900 citations or summonses were issued by the Sanitary Department for the contravention of Municipal Regulations, in addition to 1,947 notices owing to sanitary defects. Active steps have been pursued to prevent the accumulation of filth and noxious matters, the overcrowding of dwellings, and the habitation of such found to be dangerous to health or life.

5. Rats do not appear to be prevalent. Threepence per rat, and one penny per mouse is paid for all handed to the Council's authorised official. They are disposed of in the furnaces of the Electrical Department.

6. The Medical Officer of Health is under the control of the Board of Health for Kimberley. He gives all his time to his duties.

7. During the year under review much attention has been given to sanitary matters. A new regulation to prevent overcrowding and the inadequate ventilation of dwellings has been promulgated; the cubic capacity per head is now limited to 400 feet for each adult, and 200 feet for children under twelve years of age. The adoption of cans for retailing milk instead of bottles has been considered, but, owing to many difficulties, has not yet been enforced. The improvement of the sanitation of the native location, which contains a population of nearly 10,000, is now being seriously considered.

(ii) BEACONSFIELD (MUNICIPALITY).

This township is included within the area reported upon by the Kimberley Municipality.

(iii) WARRENTON (VILLAGE MANAGEMENT BOARD).

1. The water-supply is derived from the Vaal River, which runs past this village. The water in the village runs in an open furrow. Except for the severe drought during 1903, which for two months very greatly diminished our supply, we have always an abundant supply of water.

2. All excrement and rubbish are deposited at an appointed place about a mile from the village and covered up at intervals.

3. Mumps only have been prevalent this year.

4. No action has been required. The system in vogue works satisfactorily.

7. The native location which had grown to an abnormal size during the war, and threatened the health of the European population, has now been removed to a spot about a mile away from the old site which adjoined the village.

KING WILLIAM'S TOWN.

(i) KING WILLIAM'S TOWN (MUNICIPALITY).

*Report of Dr. H. M. CHUTE, Medical Officer of Health.

1. Water-supply.—The source of the water-supply is the head springs of the Buffalo River arising in the Perie range of Mountains, sixteen miles distant. The head waters of Izeli River are impounded by a concrete dam, and the water is led thence by pipes for fourteen miles into two reservoirs in town, and is thence distributed by mains and leadings to the houses.

A second source of water-supply is from the Buffalo River, five miles from town, where a large masonry and concrete dam has existed for years. During the past year this supply has been tapped and made available for town supply by a pipe line at a cost of £10,000. This additional supply will more than serve the present needs of the town and, it is fully expected, even in time of drought will render unnecessary any curtailment of the supply which of late years has often been found necessary.

The water is of good quality, and by frequent analysis has been approved, but it is subject to discolouration after rain. It is recognised and admitted by the Municipal Council that settling tanks and filter beds are very necessary, but it is impossible to do all these costly works at one time. During the past year the important work has been completed of establishing a fresh source of water-supply, which will fully meet all the needs of the town. The next work to be undertaken when finances will allow will be the addition of filter beds and settling tanks.

2. The System of Collection and Disposal of Night-soil.—The disposal of night-soil is, I believe, as good a system as could be devised for a town of under 10,000 inhabitants. It is a pail removal system and burial in sanitary trenches which are afterwards planted with trees. The pails are specially made with tight-fitting lids, and when removed, a new disinfected and cleansed pail is substituted. The vans are also made with air-tight doors, and the removal is conducted with but little nuisance.

The plantation is year by year extending, and many thousands of valuable trees are thriving and flourishing. This plantation is now a valuable asset, and will soon yield revenue. The cost of removal is borne by the tenant; the service is administered by the Council, and the scheme is self-supporting.

Slopwater.—No provision whatever is made by the sanitary authority for the disposal of slopwater, and the only method available is for the people to scatter them over their backyards or gardens, or to pour them into the public gutters. Both methods are highly objectionable and insanitary. I am persuaded that the daily pollution of the soil near to dwelling-houses caused by this method of disposal of slops, is responsible for a large proportion of preventable illness and mortality. Now that the water-supply has been so much increased, the better way until the Council can organise a removal system, would be to pour them into the street cemented drains and flush these with water.

Household and other refuse is removed by the Council with no charge to householders, and buried at the sanitary trenches and tree plantation.

3. During the year the number of notifications of infectious diseases has been 98 as compared with 91 for 1902. The list this year has been increased by the occurrence of 32 cases of Bubonic Plague; this includes all the cases that were discovered, many of which were in the outlying parts of the district, although contracted in King William's Town.

The outbreak was traced to infected rats being carried in railway trucks from Buffalo Harbour, East London, where, for some months before the disease appeared in human beings, it was known that the rats were plague-infected. In all 32 persons were affected, 20 Europeans and 12 natives, of whom 5 Europeans and 10 natives died.

The Medical Officer of Health for the Colony, Dr. Gregory, visited the town and advised as to the steps to be taken to control and stamp out the epidemic. A Plague Camp was established, a special staff of Medical Officers, Sanitary Inspectors and Nurses were appointed and the Health Department of the Colonial Office directed and had charge of the epidemic.

Very extensive and thorough disinfection was carried out of all stores and houses in which Plague-infected rodents were found, or in which Plague cases in human beings occurred. Inoculation with Haffkine's Prophylactic was extensively practised among Europeans and natives, and a war of extermination was waged against rats, many thousands being destroyed, and for a few months the town was free from rodents, until the disinfecting operations ceased, when the rats gradually returned.

4. The general scheme of year by year improving the drainage of the town by constructing in all streets good stone drains with concrete channels is proceeding, and the drainage of the town is thereby much improved.

Attention is paid to general sanitation, two Sanitary Inspectors being daily employed in the inspection of backyards and premises, and any decided breach of sanitary bye-laws is dealt with.

Overcrowding of dwellings owing to natives being allowed to occupy houses in town is of frequent occurrence. Surprise night inspections are from time to time undertaken, and prosecutions in the Magistrate's Court ensue.

It is in contemplation during the coming year to build central slaughter-houses and public washhouses.

(ii) BERLIN (VILLAGE MANAGEMENT BOARD).

1. The water-supply for the village is obtained from a spring which has been sunk in the village. The water is good and not liable to pollution, but is insufficient.

2. There is no scavenging system in this village, wherefore each household attends to their own night-soil, refuse, etc.

3. There has been no infectious disease and no hospital accommodation has been provided.

4. No improvements were made as to sanitary defects.

5. Rats are certainly prevalent in the district, but not to an alarming extent.

6. No Health Officer is employed by the Local Authority.

7. The health of the inhabitants is very good.

(iii) BRAUSCHWEIG (VILLAGE MANAGEMENT BOARD).

1. The source of the water-supply comes from a spring in the Perie Mountains. The source is not under the control nor is it situated in the area of the Local Authority. The water is neither collected nor stored, but is conveyed in tubs from the Buffalo River. There is a good water-supply at present, as it is mostly pure and not liable to much pollution,

2. There is no collection of night-soil or other household refuse.
3. No infectious disease has prevailed and it has not been necessary to provide any Infectious Diseases Hospital accommodation.
5. There have been no steps taken for the extermination of rats.
6. There is no Health Officer employed by the Local Authority.

(iv) BREIDBACH (VILLAGE MANAGEMENT BOARD).

No alterations have been made during the last year.

(v) FRANKFORT (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The source is from springs which form into a running stream and the water is pure. Water is taken from the stream by householders.

2. Night-soil.—This is disposed of in the usual way.

3. Infectious Diseases.—Small-pox broke out among some natives in this area. The cases were attended by the District Surgeon and were quarantined to prevent the spread of the disease. This area is now free from infectious disease.

4. Sanitary Defects.—Everything in this respect is in good order and well attended to.

5. Extermination of Rats.—Every step is taken to have rats destroyed.

6. The District Surgeon was employed to attend the Small-pox patients.

(vi) HANOVER (VILLAGE MANAGEMENT BOARD).

No important alterations have occurred since the last annual report. The health has been good and no case of Fever or any other infectious disease has occurred.

(vii) KEISKAMA HOEK (VILLAGE MANAGEMENT BOARD).

1. No alteration has taken place.

2, 3 and 4. Nil.

5. Rats are very scarce in this district. No steps were taken by the Local Authority to exterminate them.

6. No Health Officer is employed.

(viii) PEELTON (VILLAGE MANAGEMENT BOARD).

No alterations have occurred since the last report was made.

(ix) PERIE (VILLAGE MANAGEMENT BOARD).

1. As described in last report.

2. There is no night-soil collection, and slopwater and household refuse is disposed of as before.

3. No infectious disease has occurred. There is no hospital accommodation.

4. No action has been taken. Those found polluting the water have been punished by the Board.

5. Rats have been exterminated by the inhabitants as far as possible.

6. No Health Officer is employed.

(x) 'UMNXESHA (VILLAGE MANAGEMENT BOARD).

1. The water-supply is derived from surrounding hills, and runs within our boundaries in an open river. The supply is pure.
2. There is no need of a night-soil service, as the inhabitants are scattered farmers.
3. During this year no complaint of any importance was made to the Chairman.
4. No action of importance has been taken.
6. No Health Officer is employed.

KNYSNA.

KNYSNA (MUNICIPALITY).

*Report of Dr. GEORGE MARR, Medical Officer of Health.

The information required to be furnished in this report has already been supplied by me in my Annual Health Report as District Surgeon, and there is nothing to add to what is contained in that and in last year's report, with the exception of the conditions of appointment of the Medical Officer of Health for the Municipality, which are as follows:—

In the capacity of Health Officer, I receive a small retaining fee (£1 per month) from the Council, and I am expected to report to them any sanitary defects in the town, and to advise how to deal with them. Another duty is to examine and report upon any cases of suspected infectious disease where there is no medical man in attendance, as well as to report to and advise the Council on any matter affecting the welfare of the community that may occur. I am allowed to claim fees for actual treatment and supervision of infectious diseases, should such have to be undertaken at the request of the Council, and special fees have been paid by that body to my predecessors for investigations and reports involving an unusual amount of labour.

LADISMITH.

(i) LADISMITH (MUNICIPALITY).

For detailed information regarding the health of this town during the year ended 31st December, 1903, reference should be made to the report of the District Surgeon, who is Medical officer for this town.

1. Water-supply.—We have a permanent supply from the Zwarte-bergen Mountains, which runs into a reservoir, from where it is conveyed through the town by means of piping, every proprietor having his private tap in his yard.

2. Sanitation.—There is a sanitary service which removes the night-soil, etc., twice every week.

On the average the town enjoys very good health.

(ii) BUFFELSFONTEIN (VILLAGE MANAGEMENT BOARD).

1. There is an ample supply of water available within the area of the Board. The water is obtained from a spring in the mountain, and conveyed in open furrows. The furrow is being kept clean by a contractor.

Serious difficulties are being experienced by the inhabitants to obtain a regular supply of drinking water, the Board having no control over the water.

2. There is a regulation by which every householder is compelled to provide his property with proper pail closets. This, however, is not in force.

3. The sanitation of the village is in a very bad state.

 MAFEKING.

MAFEKING (MUNICIPALITY).

1. The water-supply is in the hands of a private company. The supply is totally inadequate, and the Council desire to run an opposition scheme, but are advised that their powers under Municipal Act 45 of 1882 do not permit this. It is hoped that during the next Session extended powers will be granted to Municipalities to meet the defects found in this Municipality. The source of the supply is springs situate two miles from the town, and just outside the Municipal area. The water is conveyed partly by an open furrow and partly by pipes. The supply is pure.

2. Night-soil is removed by sanitary contract. The bucket system is in vogue. Slopwater, household and other refuse are similarly dealt with. All soil, rubbish, etc., are deposited at sanitary pits nearly two miles away from town.

3. There has been almost no infectious disease, at any rate so little as to necessitate no concern whatever. A well-built Lazaretto exists, but no occasion as yet has arisen for using the same.

4. The Sanitary Committee of the Municipal Council from time to time make special visits round the town, and sanitary defects are dealt with as they arise. The presence of so many Asiatics makes the necessity for supervision apparent, and the result is that strict regulations are in force, and consequently there is little to complain of in the sanitary condition of the town.

5. Rats are very seldom found, and recently no steps have been taken to secure their destruction.

6. In terms of the Public Health Act, the District Surgeon acts, when necessary, as the Municipal Health Officer. It has been thought inadvisable to make a formal appointment.

 MALMESBURY.

(i) MALMESBURY (MUNICIPALITY).

*Report of Drs. WERDMULLER and HAUMANN, Medical Officers of Health.

1. Water-supply.—The main water-supply is obtained from wells, artesian and surface wells, also from tanks.

The wells, artesian and surface, belong mostly to and are under control of the Local Authority, and are situated within the area of the Local Authority.

The artesian well water is collected and stored in tanks (cement and galvanised iron), and distributed by means of pipes, and the water is pure.

Surface wells.—Water is drawn up by buckets in the case of those surface wells belonging to the Local Authority, and is liable to pollution.

In the case of private surface wells water is obtained mostly by pumps, and being covered over is less liable to pollution than in the case of those belonging to the Local Authority. On the contrary, private surface wells, with no pumping arrangement or cover are also liable to pollution from extraneous sources.

2. (a) Night-soil is collected in sanitary buckets and removed once a week for burial.

(b) Slopwater.—No provision is made by the Local Authority for collection or disposal of same. Each householder has to collect and dispose of same so as to cause no nuisance. Premises and yards are inspected regularly by Sanitary Inspectors.

(c) Household and other refuse is collected in boxes by each householder and carted twice a week by carts of the Local Authority to places some distance outside the inhabited area, but within the Municipal area.

3. Infectious Diseases.—In the beginning of the year, as stated in a previous report specially on the subject, Enteric Fever was unprecedentedly prevalent, and in which report the conditions and circumstances which led to its presence were detailedly stated, and also the means used for preventing its spread, which means were successful. Small-pox, too, was prevalent, and in the weekly statements sent to the Resident Magistrate thereanent the incidence and progress of the disease were stated and a temporary hospital, consisting of tents, was erected some distance outside the village for the treatment of patients suffering from the disease.

4. Remedy of Insanitary Defects.—Some attention has been paid to the disinfection of sanitary buckets. All premises, as already stated, are under observance of the Sanitary Inspector, who reports to the Town Council, and any defects are remedied.

5. No rats have been found in the district of the Local Authority.

6. Two Health Officers have been appointed by the Local Authority and the conditions of appointment are a fixed sum for reports on health matters and also a certain sum for visits in and outside the inhabited area in cases of infectious diseases. Since the outbreak of the Enteric and Small-pox epidemic, exceptionally few cases of infectious disease have occurred.

(ii) DARLING (VILLAGE MANAGEMENT BOARD).

1. The water-supply is good, and is obtained from wells, springs and a few tanks which are all private property, with the exception of one well which is public.

2. Night-soil, manure and household rubbish are removed privately to spots appointed by the Board, well out of the village. The houses here are very scattered, and slops are thrown over the ground.

3. With the exception of some cases of Measels in beginning of year, no infectious diseases occurred during the year, and the health of the village has been good. No Infectious Diseases Hospital exists here as it is not yet required.

4. It is proposed to have a proper sanitary cart as soon as means will allow.

5. No rats are found in this district.

6. No Health Officer is employed.

(iii) HOPEFIELD (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—With the exception of six underground tanks in Hopefield—impervious to any moisture from without—95 per cent. of the people are supplied with water from surface springs, each plot on the west side having its own spring. The public of Hopefield on the eastern side—the dry half—have hitherto been supplied with water from a strong public spring on the west side. The Railway Authorities, having laid on water for their use from a strong spring at Oude Kraals Fontein above the village, have given the Board the overflow of the same, some 10,000 gallons a day, which has been laid on by pipes to the Market Square for the use of the public. The east or dry half of the village will now be well supplied with water. The abovementioned six tanks are filled with water from the roofs of houses, and contain the best water in Hopefield. The sources of all the surface springs in Hopefield are in the Commonage and Crown lands west of the village, the former under the authority of the Board, the latter not. The area of this tract is about eight miles square; the rain falling on this area, in the opinion of the Board, gives rise to these surface springs near the river at the foot of the rise. Water is laid on by pipes, in the case of the two chief springs which provide water for the public, and these springs are not liable to pollution. The supply of water is now adequate.

2. Each householder removes his own night-soil beyond the bounds of the village to a place or places pointed out by the Board. There is as yet no system of collection and disposal of night-soil, but the Board intends taking the necessary steps for the same at an early date.

(b) Slopwater is as a rule thrown out in the yards and gardens of the village, which is somewhat straggling, and is chiefly got rid of by evaporation.

(c) Household and other refuse generally go to the manure heap in the yard, which in course of time is moved away to the gardens and lands in the neighbourhood.

3. The population of Hopefield is about 300 whites and 500 coloured. During the year we have had nine cases of Typhoid (Enteric) Fever—two amongst the whites and seven amongst the coloured, three amongst the latter proving fatal. Cleaning and whitewashing of the huts and cottages of the coloured people are resorted to, also isolation of the patients. The doctors are not agreed as to the cause of Typhoid in this place. Yards and premises are cleaned up weekly by the owners or proprietors of properties, and in many cases dirt and refuse are removed. The only other infectious disease in Hopefield, if it may be called infectious, is Consumption. It is hereditary in most of the coloured families—not known amongst the whites—and we have at least twenty to thirty deaths a year from Phthisis. Children in many cases, owing to the laziness of parents refusing to work, are badly nurtured. Hard work in winter on the farms is no doubt one of the causes, and dancing for one half of the night in a small hut, and sleeping outside in the reeds or bush the other half of the night when wet with perspiration is doubtless another cause.

No Infectious Diseases Hospital accommodation has as yet been provided.

Numerous cases of Chicken-pox, by some supposed to be Small-pox, have occurred during the latter half of the year in the district north of Hopefield amongst the coloured people and farming population, north of and around the village of Vredenburg and also about St. Helena Bay. Few cases, if any, have proved fatal.

4. There is no danger of the public springs in Hopefield being polluted, as the same are properly enclosed and duly inspected. The existence of the Board dates from August, 1903, and everything has been done to remedy sanitary defects without giving offence to the proprietors. Above the public spring, on the west side, on an adjoining plot of ground, Mr. A. J. Stigling has had a cess-pit for the last eight years. It has now been closed by the order of the Board, but the occupier and proprietor has not yet been able to remove the contents of the same, owing to the underflow or drainage of water from the rise above. When the ground is a bit drier the work of removal will be undertaken. The cess-pit is in sandy soil, thirty yards above the public spring, and not built in. Two other cess-pits, on the east side, have also been closed—the contents having been previously removed.

Overcrowding of dwellings seldom occurs, and the matter receives the Board's attention. The Board is of opinion that Government might take into consideration the exceptional number of deaths in Hopefield from Consumption, and, if possible, give the Board power to act in the matter of segregation in the last stages of the disease, and the destroying, or burning of clothes, etc., of the patient.

5. Hitherto rats have not made their appearance in Hopefield, or in the neighbourhood.

6. There is a local District Surgeon resident in the place, but he is not employed by the Board.

7. Diphtheria, etc., are almost unknown here.

(iv) MOORREESBURG (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from surface wells, belonging to private persons, and tanks (iron and cement). The supply is not always adequate, and is liable to pollution during summer months.

2. Night-soil and household and other refuse are carted away by contract.

3. Amaas, or modified Small-pox, prevailed during the year. The cases were isolated in tents outside of the village.

4. The Board is continually busy in remedying sanitary defects as far as possible.

5. There are no rats in the village as far as can be ascertained.

6. No Health Officer is employed.

7. It would be a great advantage to the health of the community if Government would assist in the boring for water, as the water now used is bad in quality and salt in taste.

(v) RIEBEEK'S KASTEEL (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from surface water and springs. The spring water is not under the control of the Board. It is situated within the area of authority. It is distributed by open furrows. Some householders have their own wells. The water is pure.

2. Householders remove or bury these.

3. No infectious disease appeared during the year.

4. A Committee of the Board goes about the place now and then, and looks after these things, and reports on any serious defect.

5. There are no rats in this place.

6. No Health Officer is employed.

(vi) RIEBEEK WEST (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from wells. Each owner of an erf has his well, and many have aermotors. The source is not under the control of the Local Authority. The water is pure and not liable to pollution.

2. Each owner is responsible for the removal of night-soil on his premises. Buckets are used and soil buried.

The Board has appointed a man to report on any defect in the disposal of refuse or slop-water. Upon notice of the Board the owner sees to such matters on his property.

3. With the exception of Measles no infectious disease has occurred.

4. No rats are ever noticed.

5. No Health Officer is employed.

MIDDELBURG.

MIDDELBURG (MUNICIPALITY).

1. The water-supply has been fully described in previous reports, and remains the same at present.

A meeting of resident householders was held in May, 1903, for the purpose of considering the advisability of undertaking, carrying out and effecting a scheme for the supply of good water to the inhabitants of Middelburg, and the following resolutions were put to the vote and carried unanimously:—

(a) To appoint a committee of householders to act jointly with the Commissioners to carry out and effect such a scheme.

(b) To take, or authorise to be taken, counsel's opinion as to the right of the Municipal Council to divert a supply or part of the existing water-supply in pipes for household purposes.

(c) To authorise a loan from the Colonial Government for the purpose of carrying out this scheme, the maximum amount not to exceed £3,000.

Boring operations started in December.

2. The System of Collection and Disposal of Night-soil, Slop-water and household and other refuse are still the same as in previous report. The bucket system is used, and the work is carried on satisfactorily by the Council's own employés. The only complaint is that the rubbish and slops are not removed as regularly as they ought to be, but the Council have not enough carts and labourers.

3. This is dealt with in the report of the District Surgeon, who is also Medical Officer of Health to the Municipality.

The outbreak of Small-pox, which started on the 29th August, 1902, is practically suppressed. The last case reported was in November, 1903.

4. The action taken by the Municipal Authorities to prevent or limit the spreading of Small-pox were:—

(a) General inoculation.

(b) Contacts isolated near the Small-pox Hospital.

(c) Disinfection of the rooms where Small-pox occurred.

MOLTENO.

MOLTENO (MUNICIPALITY).

1. A bore-hole has been sunk on the Town Commonage, from whence a good supply of water has been obtained; the water is led by corrugated iron pipes (3 inch) into the town, a distance of three quarters of a mile. Otherwise the waterworks are the same as last year.

2. The daily removal of slop-water, weekly removal of stable litter, ash and rubbish, and the bi-weekly removal of night-soil within the limits of the Township, are still in force and strictly carried out by the Council.

3. The health of the inhabitants generally has been better than in any previous year.

5. During the prevalence of Plague at East London rats and mice have been exterminated and a premium paid for the same.

6. No regular Health Officer is engaged, but when needed the District Surgeon is called in.

MONTAGU.

MONTAGU (MUNICIPALITY).

1. The local water-supply for domestic purposes is conveyed from a distance of about two and a half miles by means of pipes, which furnish an adequate supply, and is pure and well protected from pollution.

2. Night-soil is collected by means of a proper conveyance (cart with tank) between the hours of 10 p.m. and 6 a.m., and deposited in pits, which are immediately covered over with earth. Slop-water and household refuse are removed by a sanitary cart weekly, and oftener, if found necessary.

3. One case of Diphtheria and two cases of Enteric Fever occurred during the year. The cases were isolated.

5. The existence of rats is unknown in this district.

6. The Local Authority does not employ a Health Officer.

7. Generally the area may be considered healthy and free from infectious diseases.

MOSSEL BAY.

(i) MOSSEL BAY (MUNICIPALITY).

* Report of Dr. J. KITCHING, Medical Officer of Health.

1. The water-supply is from a mountain stream, about twenty-two miles distant; it is brought by pipes to a covered-in reservoir, which is situated above the town, and from there is distributed by pipes through the town. The source is under the control of the Municipality, but is not within the area of Municipal Authority. The supply is adequate, is of good quality, and not liable to pollution.

2. Night-soil is collected regularly in buckets and thrown into the sea at a place specially set apart for that purpose. The buckets, after being emptied, are washed and disinfected. No arrangement exists for the disposal of slop-water. Household and other refuse is collected and taken away by the Municipal cart.

3. During the year there were sixty-one cases of Enteric Fever. Most of these cases occurred during the first three months of the year. During April, May, June, July and August a few cases occurred and from August to December the place was free, but during December there were six cases.

During the year there were three cases of Diphtheria, one in January and two in August.

Scarlet Fever gave five cases, two occurring in June and three in August.

During June, July and August German Measels were prevalent, of which there were a large number of cases.

All cases of infectious disease are notified to the Local Authority, and the Sanitary Inspector visits the places, and sees that disinfection is carried out. In cases of Enteric Fever a special bucket is supplied for the sole use of the patient. There is a small building for an Isolation Hospital containing three rooms, originally built for Small-pox cases; practically this is of little use, as it has been used for stores belonging to the Plague Authorities.

4. No special action has been taken during the year on sanitary matters. There is an open drain system which has many defects, as the drains require very frequent cleaning and more frequent flushing than is now done. Our water-supply, although sufficient for ordinary purposes, is not enough for efficient flushing. An underground system of drainage has been suggested, as well as the use of sea-water, but nothing has yet been decided by the Local Authority, and I am convinced that, until something in that direction is done, the town will never be in as clean and pure a state as it should be.

5. Rats are still numerous. The Local Authority pays three pence for each rat that is killed; 10,672 rats have been killed during the year.

6. There was a Health Officer, at a salary of £75 per annum, but he resigned at the end of last year, and the vacancy has not been filled.

(ii) HERBERTSDALE (VILLAGE MANAGEMENT BOARD).

1. In rainy seasons the water sluit is filled with water from the flowing river, but lately, during the dry season, those farmers living above the village turn out the water by some twenty water furrows and dams. At such times the village is supplied only by a very small underground pipe, about five inches in diameter, constructed by Messrs Johnson and Gibbson. Such interval of scarcity has often proved to be very dangerous to the community of the village. The other part of the furrow is open, but enclosed with a fence. The water is pure.

3. No infectious disease prevailed during the year. There is no hospital accommodation for such cases.

4. The filth and noxious matters are collected and buried at certain places and at certain times.

5. There are no rats.

6. No Health Officer is employed.

7. The health during the past year was exceptionally good; only Influenza prevailed.

MURRAYSBURG.

MURRAYSBURG (MUNICIPALITY).

1. Water-supply.—This is derived from (a) springs in the Buffels River, situate without the limits of the Municipality. The water runs in the bed of the river for a distance of about two miles, where it is dammed

up and then brought into town by means of an open water-furrow, about two miles in length. This supply has several times totally failed, but, when running, is used both for domestic and irrigation purposes. (b) Wells, both public and private, had to be resorted to on account of the failure of river and spring water, due to the effects of drought; the water-supply is quite insufficient.

The Council has during the year erected two windmills, and placed five tanks at every mill, from which tanks the water is distributed by means of pipes.

2. Cess-pools are still principally in vogue. Household and other refuse are removed at the expense of the Council, who employs a cart for the purpose.

3. There has been no really severe epidemic, though there were several cases of Diphtheria and a few cases of Typhoid Fever during the year.

4. The Council causes frequent inspections to be made of all premises, water-closets, furrows, dams, etc., and takes immediate steps against all defaulters.

5. Very few rats, if any, are found.

6. No Health Officer is employed.

OUTDSHOORN.

(i) OUTDSHOORN (MUNICIPALITY).

* Report of Dr. R. M. TRUTER, Medical Officer of Health.

1. An excellent supply of water is conveyed in pipes from springs on the slope of Zwartberg Range, and is under the control of the Local Authority. The supply is adequate, constant and direct, and not in any way liable to pollution.

2. (a) Night-soil is removed weekly, the town being for that purpose divided into blocks. The soil is deposited in trenches, about two miles out of town. Of the 1,974 dwellings, only 800 are at present served by the Municipality and the rest by private contractors; arrangements are, however, at present in progress to place all removals under Municipal control.

(b) Slop-water.—A daily collection takes place throughout the town with proper slop-carts; the slop-water, after filtration, is pumped on to the same site where night-soil is dumped.

(c) Household and Other Refuse.—A daily collection in covered refuse cart is made and deposited in same trench as night-soil. The collection does not include trade refuse, which is carted privately, but also treated at the Municipal site.

3. The following cases of infectious disease have been notified:—

Diphtheria	63
Typhoid	18
Scarlet Fever	16
Small-pox	2
Erysipelas	3
Phthisis	17
Leprosy	3
Puerperal Fever	4
Cerebro Spinal Meningitis... ..	1

* Forwarded by Municipality for publication.

Whenever a case is notified inquiries are made to trace the probable source of infection. Special pails are provided for the dejecta of infectious cases, disinfectants supplied, and premises fumigated when thought necessary. Children from infected houses are kept out of schools under Municipal control. During the year 1,147 notices have been served on owners or occupiers to clean premises and abate nuisances.

4. A few houses have been condemned as unfit for habitation, and instructions have been given at every house where infectious disease has been notified as to how to deal so as to prevent the spread as far as possible. Most of the cases cannot be properly isolated at home, and there is no Infectious Diseases Hospital here.

5. No rats are found.

6. A Health Officer is employed by the Local Authority, no special condition being specified. The ordinary duties of a Health Officer are carried out, but the position here is purely nominal, and undertaken more from a public-spirited point than for the remuneration.

7. There has been a marked decrease in Typhoid. A severe epidemic of Diphtheria occurred which could only have been properly dealt with in a hospital so as to prevent the general spread. The natives spread the disease broadcast, and I would like to see the day when all the natives will have their proper locations out of every town. The Small-pox cases were placed out of town in tents, and the spread of the disease was thus prevented.

(ii) CALITZDORP (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—There is nothing to remark under this heading, the position being exactly the same as previously reported.

2. Collection and Disposal of (a) Night-soil, (b) Slopwater and (c) Household and other Refuse.—The matter under sections (a) and (c) of this heading continues to be carried out successfully under contract to the Board, and it may be added that the enforcement of additional regulations in that behalf tends considerably to facilitate the matter. Up to the present it has not been considered essential to establish the same system as regards slopwater.

3. Prevalence of Infectious Diseases.—Taking into account the prolonged drought and defective water-supply, owing to which pollution is absolutely unavoidable, it is remarkable that infectious diseases have not prevailed to a greater extent. It is however to be regretted that a number of cases of Diphtheria have occurred within the Board's area during the past twelve months, but it is presumed that the source was to be traced beyond its limits. Every precaution is taken in order to prevent the spread of the disease in which the local District Surgeon materially assists. No provision has, as yet, been made for hospital accommodation.

5. No rats are to be found in this area.

6. No Health Officer is employed by the Board.

(iii) DYSELSDORP (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from springs, and is under the control of the Local Authority. The supply is sufficient and of a pure quality.

2. Night-soil is removed by the inhabitants themselves to the veld. Regarding the disposal of slopwater, no system has yet been arranged. Any filth round dwelling-places must be gathered and burned by the inhabitants every month.

3. There is no Infectious Diseases Hospital accommodation here.

4. All dams, springs and furrows, under the control of the Board, are cleansed every three months.

5. No rats are found.

6. There is no Health Officer.

PAARL.

(i) PAARL (MUNICIPALITY).

The report of the District Surgeon of Paarl, who is also Medical Officer of Health to the Municipality, will be found on page 104.

(ii) FRANSCHÉ HOEK (MUNICIPALITY).

1. The water for Municipal purposes comes from the adjacent mountains, and the source is not within the area or under the control of the Local Authority; the water is collected in open reservoirs, and distributed by means of open furrows; the supply is adequate, and the water is pure and not liable to pollution.

2. There is no system of disposal of night-soil, slopwater or household refuse, as the inhabitants themselves look after these things privately and properly.

3. Only a few cases of infectious disease had been reported during the year, and these were privately looked after under the supervision of the Council.

4. There was no need of any special action on the part of the Council under this heading.

5. There are no rats prevalent in the area of the Local Authority.

6. No Health Officer employed.

7. The general conditions as to the health and sanitation of this area are on the whole satisfactory.

(iii) WELLINGTON (MUNICIPALITY).

1. The water-supply is pure and obtained from the Spruit River, and is carried for two miles in pipes into the reservoir on the boundary of the Municipality, from which it is supplied to the inhabitants through pipes. The supply is adequate and pure, having its source in the Hawequas Mountains, some miles out of town. The source is not under Municipal control.

2. Night-soil and refuse are regularly removed out of town, as are also household and other refuse.

3. A slight outbreak of Small-pox (Amaas) occurred in the town, infection being brought from Hermon. Prompt measures were at once adopted, all patients and contacts removed outside the town, the premises all thoroughly disinfected, and the spreading of the disease promptly checked. In all six cases occurred.

4. During the past year five cases of Typhoid occurred.

5. The Council do not possess an Infectious Diseases Hospital.

6. Active steps were taken during the past year by the Council for the extermination of rats with partial success only, the reason for this being that the town is crossed by two rivers, the Spruit and Krom Rivers, the former, which is badly infested with rats, being outside the Municipal area.

7. The District Surgeon acts as Health Officer.

PEDDIE.

PEDDIE (VILLAGE MANAGEMENT BOARD).

The health of the village during the year has been fairly good. An outbreak of Small-pox occurred but was confined to two families and was dealt with by the Divisional Council.

No alterations have been made in regard to the health and sanitary arrangements of the village since last report.

PHILIPSTOWN.

(i) PHILIPSTOWN (MUNICIPALITY).

1. Water-supply.—The water-supply is obtained from a strong spring on the town commonage and conveyed for irrigation purposes in open galvanised iron furrows. The water for domestic purposes is drawn from an Abyssinian pump, although several householders have private tanks for rain water.

The spring referred to is situate on the immediate outskirts of the town in a spruit. The supply for domestic purposes, and which the Council had analysed by the Government Analyst last year, is abundant, but for irrigation purposes inadequate during summer.

2. The pail system has been introduced some time ago and satisfactorily carried out. Excrement is carried away by a contractor twice a week. Household and other refuse is likewise carted away twice a week, both excrement and refuse being deposited at a safe distance outside the limits of the town.

3. Very few infectious diseases prevailed during the last year.

4. The Council is taking steps to introduce a better system for the removal of night-soil and refuse and also for conveying water for domestic purposes.

(ii) PETRUSVILLE (MUNICIPALITY).

1. The water-supply for drinking and household purposes is permanent, pure, and ample, and is obtained from a spring situate above the township on a much higher level. Since last report a sufficient number of hydrants has been erected in different parts of the town, and the general drinking supply of water is now conveyed direct from the fountain in a 4-inch pipe to a reservoir, and thence in 2-inch pipes to the said hydrants. This scheme has cost the Municipality about £600. The supply in the pipes cannot become stagnant or polluted, owing to an arrangement to take water from the 4-inch pipe for the supply of the town and return the remainder or overflow (which is continually running) to the reservoir, which is then used for irrigating the village erven, the number under cultivation being about 200. The entire fountain is enclosed with stone and cement, and the top roofed in to enable it to be regularly cleaned, which is done once a week. It has to be entered from the top by means of a trapdoor and ladder placed inside; this trapdoor is always kept locked. Owing to these precautions, it follows that no pollution of our drinking-water can possibly take place and, therefore, the inhabitants can always depend upon receiving a pure supply, which fact, we think, justifies the large expenditure incurred by the Council. The whole water supply of the town is within the area and under the control of the Municipality.

2. The disposal of excrement is done by contract twice a week, and pits enclosed with a barbed-wire fence have been made about $1\frac{1}{2}$ miles out of town to receive same. Every time the tank is emptied into the pit the contents are covered with the excavated soil left there for the purpose. The tub system is compulsory and answers well.

The Municipal cart goes round twice a week and takes all household refuse to a site selected for that purpose, a considerable distance off. The sluit, on the outskirts of the town, which was formerly used as a depositing site for rubbish, has been abolished.

3. The general health has been very good, only eight cases of Scarlatina among children, between the ages of eight and fifteen, having occurred during the year.

In order to cope with outbreaks of infectious diseases, especially among the coloured folks, an Isolation Hospital has been established under the management and direct control of the Municipality.

4. No sheep or goat kraals are allowed within the township, and kraals, used for other purposes, have to be cleaned and all foreign material or loose matter removed once a week, and disinfected once a month. Privies, backyards and stables are inspected twice a week; butchers' shops and similar premises once a week, and any defects in sanitary arrangements are at once reported to the Municipal Clerk.

The town has been kept in a fair state of cleanliness, and the sanitation as carried out is considered satisfactory and sufficient for the present requirements of the population.

There are no rats in this area.

PIQUETBERG.

(i) PIQUETBERG (VILLAGE MANAGEMENT BOARD).

The village has been wonderfully exempt from illness during the year. A few cases of Pneumonia, Bronchitis, and about eight cases of Typhoid (three whites and five coloured) are the only diseases worthy of notice. The Typhoid cases were all of a severe type, and were confined to one portion of the village, due to the uncleanly state of one of the springs. The epidemic stopped immediately after this spring had been thoroughly cleaned out. There were also a few cases of so-called Small-pox amongst the natives, but of a mild form, and did not spread. Proper rules and regulations have now been drawn up for the guidance of the public as regards the sanitation of the place, and a proper native location is in course of being measured out outside the village. The main supply of water to the village is in perfect order and is well looked after. The disposal of the night-soil is now efficiently carried out.

(ii) PORTERVILLE (MUNICIPALITY).

There is nothing to add to previous reports in regard to the health and sanitation of this area.

A tender has just been accepted for the proper removal of night-soil, and the work will be commenced so soon as the regulations for that purpose have been approved of and published.

The proposed water scheme, which was referred to in last year's report, will again be discussed at a public meeting to be held on the 16th April, 1904, when it is trusted the matter will be definitely settled.

PORT ELIZABETH.

(i) PORT ELIZABETH (MUNICIPALITY).

1. The water of Port Elizabeth is derived from Van Staaden's, at a distance of thirty miles to the west of the town, where a storage reservoir is situated, capable when full, of holding thirty million gallons of water. The reservoir is supplied by several small streams and the water is filtered before delivery. This supply is supplemented by a pumping-station four miles lower down the Van Stadden's Valley, where the water is pumped from a small reservoir and into the leading mains between the before mentioned reservoir and the town. The supplies are outside the areas of the Municipality, and the water is conveyed throughout the town by cast iron mains. The purity of the water is satisfactory, and with care and great economy, the quantity available has been found sufficient for the actual needs of the town. New works, calculated to supply 1,500,000 gallons per day, situated at the Sand, Palmiet and Bulk Rivers, are now about to be commenced.

2. Until the increased water-supply referred to above is available the Municipality are compelled to prohibit new water-closets, especially as the town is only partially sewerred, which defect, however, it is proposed to remedy by the execution of a comprehensive sewerage scheme in the near future. Full surveys and preliminaries are now in hand for the preparation of this scheme. At present the pan system is in operation, the tubs being collected in covered wagons, and the material taken some considerable distance from the town where it is buried in trenches.

The refuse collected in the town is carted to railway sidings, tipped into trucks, and under agreement between the Cape Government Railway and the Harbour Board, run out to the drift sands at the South End of the town, where it is utilised by the Forestry Department by covering up the sand, the area being subsequently planted.

3. During the year 1903 the infectious diseases notified were as follows:—

Disease.	Europeans.		Coloured and Native.		Tl.
	Male.	Female.	Male.	Female.	
Typhoid Fever	102	24	21	10	157
Small-pox	13	10	50	25	98
Erysipelas	1	1	—	—	2
Diphtheria	8	16	1	1	26
Scarlet Fever	29	31	1	5	66
Plague	16	8	67	20	111
Puerperal Fever	—	2	—	1	3
Totals	169	92	140	62	463

The treatment of cases of Plague and all measures for the suppression and prevention of the disease were under control of the Plague Administration Board, with Dr. D. C. Rees as Principal Medical Officer.

The cases of Small-pox were treated at the lazaretto, specially provided for that purpose. The Local Authority carried out the removal of all patients, the vaccination and re-vaccination of all contacts, and the disinfection of all premises and articles. In addition to the contact vaccination a very thorough campaign throughout the whole of the town was organised. It is recorded that in all 15,611 persons were vaccinated or re-vaccinated by the Public Vaccinator, the Medical Officer of Health, or one of the Municipal lay vaccinators.

A large number of cases of Enteric Fever were treated at the Provincial Hospital.

The Sanitary Department, on being notified of a case of infectious disease, cause an inspection of the premises to be made, and instruct the people as to isolation and disinfection. Disinfectants are supplied by the Local Authority at cost price.

In the case of Enteric Fever special tubs are provided for the receipt of the excreta, and removed regularly without cost to the occupiers of the premises in which the case is being treated.

During the year 15,814 notices were served to cause the abatement of nuisances (13,483 of which were in connection with the vaccination crusade). At the instance of the Local Authority forty-two prosecutions were instituted in the Magistrate's Court, leading to thirty-eight convictions for offences under the Public Health Acts, and the Port Elizabeth Municipal Act, 1897.

Sanitary Clauses.—The owners of 101 structures, which were unfit for human habitation, were cited to appear before the Town Council, who granted closing orders for same; 1,399 tins and 868 lbs. of unsound articles of food were seized and destroyed. The dairies, bake-houses, stables, slaughter-houses, Kafir eating-houses, and food supply stores were closely and frequently inspected.

Overcrowding exists to a very considerable extent in the town, and until relief is possible by an increase in the amount of available accommodation for our Native, Asiatic and Coloured population, it is impossible to prevent it.

5. This is a question coming under the cognizance of the Plague Board, and the Acting Senior Plague Medical Officer, has furnished the following information:—

“Rats are very prevalent within the boundaries of the Municipality, chiefly owing to the large quantities of grain stored in the numerous stores. The residents do little towards exterminating them; the only efforts made which would have any effect towards reducing the number, are by the Plague Rat-destruction and the Plague Disinfecting gangs. The average number of rats destroyed by these two departments is about 218 per week.”

6. A qualified Medical Officer of Health holding a Diploma in Public Health is employed by the Local Authority. He devotes part of every day to the duties of the appointment and performs duties similar to those laid down by the Local Government Board in England.

7. Urgent requirements of town are:—

- (a) A drainage scheme, and until such is completed a regular removal by night from every house of night-soil, slops and other offensive liquids, the charge for same being levied by a special rate.
- (b) A periodical removal of all household refuse by the Local Authority from every house, the cost of same being charged to the general rates.
- (c) An Infectious Disease Hospital and free disinfection of all infected articles.

During the year the outstanding health measures have been:—

- (a) Expropriation of the Russell Road Location, a notoriously congested and insanitary area.
- (b) Closing down and removal of structures constituting Gubb's, Cooper's Kloof and Stranger's Locations.
- (c) Closing down and removal of the worst structures in Vlei Post insanitary area, with improvements of remaining structures in that congested area.

(ii) WALMER (MUNICIPALITY).

*Report of Dr. T. L. BLACKBURN, Medical Officer of Health.

1. There is no regular water-supply, the inhabitants depending on rain water, which is collected in the usual way and stored in galvanised iron tanks.

2. Night-soil.—This is worked on the tub system. The sanitary officials have instructions from most of the inhabitants to call regularly. In other cases if the Sanitary Inspector thinks a tub is being kept unchanged too long he has it removed at the expense of the tenant. The tubs themselves are emptied into pits and covered over, this being done at a distance from the village sufficient to be quite safe.

(b) Slopwater.—As a general rule this is spread over the gardens. In some cases I found it was run into underground tanks. These were unprovided with drains to run the water off, so after a time they overflowed, causing pools of stagnant water which were both unsightly and insanitary. On this account I have advised that they should be filled in.

(c) Household and other Refuse.—This is collected by the sanitary officials and disposed of in suitable places.

3. The following cases of infectious disease have occurred during the year :—

Small-pox	6 cases.
Bubonic Plague	2 „
Diphtheria	2 „
Scarlet Fever	1 „
Enteric Fever	5 „

In the case of an infectious disease being notified, immediate steps are taken for the isolation of patient and contacts and for the disinfection of the premises. This is done under the immediate supervision of the Chief Sanitary Inspector. Walmer itself has no Infectious Diseases Hospital, but the Municipality have arranged with the Port Elizabeth Municipality that all cases of Small-pox and Plague should be treated in the Lazaretto there.

4. The Sanitary Inspector periodically inspects the whole village. Any accumulation of filth or noxious matter is at once attended to.

Notice is first given to those responsible to at once remove such accumulation, and if this is not attended to the removal is undertaken by the Municipality at the expense of the tenant.

Unhealthy dwellings and those in a condition dangerous to life are inspected by me and on an adverse report are removed.

5. Rats are not very prevalent in this district.

A reward is given for each dead rat brought to the Sanitary Inspector, but practically none have been brought in.

6. A Health Officer is employed by the Municipality.

The conditions of employment are that he is paid by the time spent on Municipal work, and must attend whenever called on by the Municipality.

7. (a) I would point out that of the six cases of Small-pox five came from Emslie's Location, as also did the two cases of Bubonic Plague.

This Emslie's Location is a private one and consists of rows of single-roomed galvanised iron structures entirely for the use of natives.

It stands just inside the boundary of Walmer and Port Elizabeth, and is I consider a distinct menace to the health of both places.

* Forwarded by Municipality for publication.

Port Elizabeth has lately at great expense had all locations removed from close proximity to the town, and I think it would be very advisable if the same steps were taken with regard to this one.

(b) The Enteric Fever outbreak started with the case of a gentleman who had been travelling a good deal. I was unable to find where he contracted it, but the other cases undoubtedly arose from his, all occurring within a stone's throw of his house.

(c) Slaughter Houses.—There are three slaughter houses here, but run by Port Elizabeth butchers, and are practically for the use of that town.

I have inspected them several times and have had always to report adversely on them. They are situated quite close to where the Enteric outbreak was, and I consider by the collection of flies, they were distinctly dangerous for the spreading of the disease.

I understand the Council is taking steps for their removal, and I sincerely hope it will be successful.

PRIESKA.

PRIESKA (MUNICIPALITY).

1. During the year the supply of water has been considerably increased, and the increase is much appreciated, there having been no lack of supply during the last drought.

2. Under this heading there is nothing fresh to report. A scavenger is employed under the personal supervision of the Sanitary Inspector.

3. Nil.

4. Pipes are laid from the fountain enclosed with flat stones, lime and cement. Pure water is obtained from the taps in the town.

7. The general state of the town is good, and as far as is known no epidemic or infectious diseases have occurred.

PRINCE ALBERT.

(i) PRINCE ALBERT (MUNICIPALITY).

1. The water-supply of the village of Prince Albert is derived from a spring, which has its rise in the Great Zwartberg Range situate without the area of the Municipality and is conveyed in an open furrow. The supply is considered ample in so far as the domestic wants of the village are concerned, but not sufficient for the purpose of irrigation.

2. Night-soil, Household and other Refuse.—These are disposed of by removal and burial at a spot specially set apart by the Council.

3. Three cases of Enteric Fever were reported, the cause not being ascertained. No Infectious Diseases Hospital accommodation has been provided.

4. This matter is now engaging the attention of the Council.

5. There are no rats in this town.

6. No Health Officer is employed by this Council.

(ii) LAINGSBURG (MUNICIPALITY).

1. The water-supply is still from shallow wells and open sluits exposed to contamination of all sorts. A few of the inhabitants have rain water tanks which are not always properly cleaned.

2. The removal of slopwater is not provided for. The removal of night-soil by a proper authorised man is not enforced.

The wagon which removes the night-soil is itself a nuisance and dangerous to health, owing to the barrels not being properly cleaned and not tarred. There are insufficient closets to many houses, and there is no means of enforcing the cleaning of the buckets, and so minimising the nuisance to other people caused by the removal of the contents.

7. The village was for the greater part of the year without any Sanitary Authority or Inspector. The majority of the yards and open spaces were never thoroughly cleaned, especially in the vicinity of the Berlin Mission and rooms adjoining to this part.

The streets are untidy and dirty from want of being made, and rubbish of all sorts is allowed to collect.

QUEENSTOWN.

(i) QUEENSTOWN (MUNICIPALITY).

1. The water-supply is obtained from the river, boreholes, and rain-water in tanks. The source is under control and within the area of the Local Authority. The supply is conveyed by pipes to a reservoir, is inadequate and liable to pollution through human occupation of gathering ground.

2. The bucket system is in vogue and the night-soil is buried outside the town.

3. Twenty-four cases of infectious disease were notified. The Small-pox Hospital is used for infectious cases, and the Frontier Hospital for venereal cases.

4. The Plague Medical Officers have had command of the district. Buildings have been closed and destroyed and nuisances have been regularly brought forward and remedied. Most cases of Enteric, willing to go, have been treated in the Frontier Hospital, and foci of infection thereby stamped out.

5. Rats are prevalent, and their wholesale destruction is being effected by the Plague Authorities.

6. A Health Officer is employed and is required to do all he may be called upon, and to take effective supervision of all sanitary matters.

7. Pulmonary Tuberculosis exists among coloured and white, and the need of wards for the treatment of such cases is greatly felt.

(ii) HACKNEY (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from the small streams which run through our large area.

2. There is no special system adopted.

Each house has a place at some distance from the dwelling.

3. No infectious disease occurred.

4. No sanitary defects existed during the year.

6. The Board does not employ a Medical Officer of Health.

(iii) KAMASTONE (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The supply of water is mostly obtained from natural springs within the area of the Local Authority. The water for domestic purposes is carried from springs and rivers by each individual person for his or her private use. The supply is generally adequate, care being taken not to pollute the water.

2. The Board designated certain places for the disposal of night-soil, slopwater and household and other refuse at a distance from the houses. By the help of the officers of the Board this system has been carried on with much success.

3. There have been no outbreaks of any infectious disease during the year.

4. The Board appointed several officers to see that certain places designated for domestic purpose be kept clean, that all filth and noxious matters be carried away from each individual's dwelling-place, and to report the arrival of all strangers, so as to prevent overcrowding.

5. The Board notified all residents within its jurisdiction to destroy all rats that could be found and to report any prevalence of such.

6. No Health Officer is employed by the Board.

(iv) LESSEYTON (VILLAGE MANAGEMENT BOARD).

1. For drinking purposes water is drawn from springs abounding on either banks of the spruit known as Lesseyton or Sterman's Kraal, about a quarter of a mile from the village. Each family provides for itself. It is constantly cleaned in order to prevent pollution, and never fails to supply the wants of the people even in the severest drought. Water for irrigating is led in an open furrow and conserved in a dam.

2. No permanent system is adopted for removal of night-soil. There are no latrines.

Each family disposes of its own refuse at a far-off distance from the village.

3. The health of the people in general has been sound during the year despite the variable climate during the dry season from April to November, and free from visitations of any of the contagious diseases prevalent elsewhere.

4. No action has been taken, as people adhere to strict cleanliness.

5. Rats are not prevalent, and therefore no steps are taken for their extermination.

6. No Health Officer is employed.

(v) STERKSTROOM (MUNICIPALITY).

*Report of Dr. J. B. CUMMING, Medical Officer of Health.

1. The water-supply is obtained by open furrow and consequently impure. The quality is very good at its source, and were it protected from pollution would be quite satisfactory in that respect. The quantity is insufficient.

No proper reservoir has been built, and shortly after a rain the supply is not much more than after months of drought.

A reservoir and pipes to distribute the water would go a long way to make both quality and quantity of water almost all that could be desired.

2. Excrement and household refuse are now removed by covered cart once weekly and twice in the case of hotels.

Slopwater is not provided for, and many yards smell very sour.

3. There have been about thirty cases each of Typhoid Fever and Scarlet Fever and two cases of Small-pox during the year.

The proper precautions to prevent the spread of Small-pox were taken with the above satisfactory result.

4. This village has been governed by a Mayor and Council for about six years.

During that time improvements have taken place as regards the making of some of the streets, the closing of the cess-pits which before that time were in universal use, the removal of household refuse, which before was permitted to lie at peace in the yards and streets, the abolition of pigsties, which aforetime were conspicuous to eye and nose. Drainage is very defective.

Flies are in myriads and undoubtedly play a part in spreading infectious disease.

7. Cattle kraals still exist and are a source of pollution to water and air. Many more cattle are kept than are necessary for the supply of milk to the inhabitants.

With regard to the danger of the spread of Plague, I consider that the Town Council should take every possible step to clean the streets, watercourses and yards. Vagrants should be got rid of. Arab and Indian residences and shops should be inspected and the owners prevented from sleeping and living beside their fruit, vegetables and other wares.

Steps should be taken to limit the number of domestic animals, and mice should be eradicated. Rats luckily are unknown here. An official should be posted at the railway station to inspect all people arriving by train and report all cases of arrival from infected parts, and especially to have any sick person seen by the Medical Officer of Health.

(vi) WHITTLESEA (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The water-supply for domestic purposes is now derived from three sources:—

(a) By means of rain water tanks.

(b) From the Ovkraal River.

(c) From two wells lately opened yielding a pure and sufficient supply.

2. Scavenging.—This is still carried out as in the past by the householders themselves and is satisfactory.

Household Refuse.—This is satisfactorily disposed of, being under the supervision of the Board Supervisor.

3. Infectious Diseases.—During the past year there have been two cases of Diphtheria and one of Scarlatina in the village.

RICHMOND.

RICHMOND (MUNICIPALITY).

1. The water-supply is derived from two springs situated in the Onger's River, which is under the control of the Local Authority. All water for domestic purposes is carried from these springs in open buckets. For irrigation purposes the water is led in an open furrow from the river to the gardens.

2. (a) The tub system is in use and the night-soil is conveyed a good distance out of the town and buried.

(b) and (c) Slopwater, household and other refuse are carried away on the old system.

3. The general health of the district has been unsatisfactory, chiefly owing to the prevalence in the beginning of the year of an epidemic of Diphtheria. A few cases of Scarlet Fever and Puerperal Fever also occurred.

4. Every precaution is taken to remedy sanitary defects.

5. Nil.

6. No Health Officer is employed.

RIVERSDALE.

(i) RIVERSDALE (MUNICIPALITY).

1. The water-supply is derived from a river and is led down into a reservoir in pipes, and from there also in pipes into the streets and private properties.

The source is owned by the Municipality, but is outside the area.

The supply is constant and pure and no contamination occurs during transit.

2. The pail system is in vogue and the pails are cleaned nightly. No cesspools exist.

Scavenging is well supervised and household refuse is removed daily.

3. No infectious diseases prevailed.

4. Yards are inspected twice a week.

(ii) ALBERTINIA (VILLAGE MANAGEMENT BOARD).

1. Water-supply.—The water-supply is obtained from a spring situated within the area of the Local Authority. As yet the control of the water is not under the Local Authority, as the whole water right has been sold to some of the erven. Steps are now being taken by the Local Authority to get control over the water. The water is collected in a dam and distributed by means of open furrows. The supply is adequate and pure.

2. (a) Night-soil is collected by means of sanitary buckets and removed at night time to a place pointed out by the Board.

(b) Household and other refuse are removed by residents to a place outside the village pointed out by the Board.

3. No infectious disease has prevailed during the past year.

4. No sanitary defects have been found to exist during the past year.

5. Rats are not prevalent within the limits of the Board.

6. No Health Officer is employed by the Board.

ROBERTSON.

(i) ROBERTSON (MUNICIPALITY).

1. The drinking water-supply is abundant and of good quality. The water is brought from two streams about five miles beyond the Municipal boundary in iron pipes to the village, and there by means of branch pipes and public taps supplied to the inhabitants free of charge. The only chance of pollution is from manured lands above the intake.

2. Night-soil is removed at the rate of 9d. per removal; the system is the duplicate pail system. There is no arrangement for the removal of slop-water. Household and other refuse are removed by the inhabitants to deposit heaps beyond the town, the sites being chosen by the Municipal Commissioners.

3. Since the supply of drinking water has been brought from the source in pipes there has been a considerable decrease in the number of cases of Typhoid and other infectious diseases. The Sanitary Inspector has instructions to make special inspections of all houses and their surroundings where infectious diseases have been reported by any of the medical practitioners to exist.

There is no Infectious Diseases Hospital.

4. A report is submitted every fortnight on the sanitary condition of the town by the Sanitary Inspector, and where necessary offenders are prosecuted.

5. There are no rats in this district.

6. A Health Officer has not yet been appointed.

(ii) LADY GREY (VILLAGE MANAGEMENT BOARD).

1. The water-supply is the same as described in the last report, the water running in an open furrow. The Board has obtained the service of an overseer to look to the proper cleaning of the furrow and to prevent the pollution of drinking water.

2. Disposal of Night-soil.—As reported last year. In this matter the Board has secured the services of an able Sanitary Inspector who must see that every householder has a w.c. kept in clean order.

The disposal of household and other refuse is left to each householder.

4. Care is taken to keep the town as clean as possible, and all complaints at once receive the attention of the Sanitary Inspector.

SIMON'S TOWN.

(i) SIMON'S TOWN (MUNICIPALITY).

The report of the District Surgeon of Simon's Town, who is also Medical Officer of Health to the Municipality, will be found on page 131.

(ii) KALK BAY-MUIZENBERG (MUNICIPALITY).

* Report of Dr. J. W. BOLGER, Medical Officer of Health.

1. The water-supply is rain-water collected on top of mountains above Tokai within the Municipal boundary. It is stored in a reservoir and led from thence in iron pipes to a covered-in service reservoir, situated on a hill near Muizenberg. From this it is distributed in iron pipes throughout the Municipality. The supply, so far, has been abundant and adequate. It is not filtered, but is pure with the exception of fragments of vegetable matter and the colouring material thereof which it contains.

The area is fenced in, and is not liable to pollution.

2. Night-soil is removed once a week at least from every pail.

Slop-water is taken away daily, except Sundays, and so is household and other refuse.

Night-soil, household and other refuse are buried in the sands about two miles down the beach, and far away from any habitations.

Slop-water is poured into the sea through an iron pipe at a rocky part of the coast at St. James.

Men are constantly employed cleaning, removing and preventing the accumulation of any filth or noxious matter.

The two Sanitary Inspectors attend to the inspection of dwellings.

3. Infectious Disease.—There were the following cases:—Small-pox, 1 (which was promptly removed to Rentzkie's Farm); Enteric Fever, 11; Scarlet Fever, 10; Diphtheria, 5.

Most of the Enteric cases came from other parts, and all recovered except one, which was a relapse case from Worcester.

All these cases were isolated, as far as possible, as there is no Infectious Diseases Hospital here.

4. Rats.—479 were killed during the year. They are not unduly numerous, and none were observed to be of a sickly character.

5. Births and Deaths.—There were forty-four white births, and fifty-four coloured, making a total of ninety-eight.

Of deaths there were twenty white, and sixty-two coloured, making a total of eighty-two. The deaths were mostly among children.

SOMERSET EAST.

(i) SOMERSET EAST (MUNICIPALITY)

1. The town water-supply is obtained from springs rising on town property, and conveyed in pipes from the storage reservoir to the town, where it is distributed in pipes.

2. The night-soil is collected weekly and deposited in pits about two miles from town. Householders must see to the removal of all household rubbish and slop-water.

3. The number of cases of infectious disease for 1903 was less than for 1902.

Every precaution is taken with the removal of night-soil where there is a case of infectious disease.

The only hospital at present is the Contagious Diseases Hospital.

4. The whole area where the town water-supply comes from has been thoroughly fenced.

The Town Sanitary Inspector sees that no filth is allowed to accumulate and that no overcrowding takes place. Nothing has been done in the matter of unhealthy buildings.

5. In 1902 the Council paid a good reward for the destruction of rats, and a great many were destroyed. They are still plentiful.

6. The Council has no Health Officer.

(ii) PEARSTON (MUNICIPALITY).

1. The source of the water-supply is from the Vogel River, and is not under the control of the Local Authority as it is situated without the Municipal area.

The water is collected by means of a dam, constructed in the river, and is brought into town by means of an open furrow.

The water-supply is inadequate, not always pure, and liable to pollution.

It is the intention of the Municipality to take the necessary steps to bring the water into town by means of pipes, and, with the support of the Government, an adequate supply, both pure and free from pollution, can easily be had for a sum of from £1,000 to £1,500.

2. Night-soil and slops generally are deposited in the ordinary earth or water-closets.

Household refuse is carted away by every householder at his own expense to a spot pointed out by the Local Authority.

3. The following cases of infectious disease were reported :—In August, three Scarlet Fever; in September, five Scarlet Fever and one Typhoid; in November, two Scarlet Fever and one Typhoid; in December, two Typhoid Fever.

The Scarlet Fever cases were very mild.

The Typhoid Fever cases—which were brought in from the country—were well cared for and properly isolated at home.

4. There is no Infectious Diseases Hospital accommodation here. The town generally has, like all sparsely built country towns, been in a fairly clean condition during the year, so that no special steps had to be taken. But the placing of only one native location outside the town instead of native huts and hovels all about the town, and the immediate erection of suitable Government buildings, will greatly minimise the danger of outbreaks of Typhoid and other dangerous and infectious diseases.

The public well has now received special attention, a windmill having been put up, and a suitable cement tank made for the convenience of the public.

5. No rats have been reported as having been prevalent within the limits of the Municipality during the year.

6. There is no Health Officer to this Municipality, there being no necessity for such an appointment just at present, the town being generally in a fairly healthy state.

7. Airy Government buildings and an adequate supply of pure water for the town are necessities which call for immediate attention.

STELLENBOSCH.

(i) STELLENBOSCH (MUNICIPALITY).

1. Water-supply.—The town water-supply for domestic purposes, etc., is taken from the Eerste River, the reservoir being situated within the Municipal area at a distance of about a mile and a half from the centre of the town. From the reservoir the water is conveyed in cast iron main pipes, and distributed throughout the town by means of branch lead pipe leadings.

The supply is more than abundant for the present consumption, and is under direct control of the Municipal Council.

The water is of an excellent quality, but considering the number of farms and dwellings along the river above the intake, the water is liable to be polluted by means of washing of clothing, bathing, etc.

The Council is now having a Private Bill prepared for Parliament, in order that the water may be taken out of the river at a point about ten miles from the town, so as to be above all pollution.

2. (a) Night-soil.—The night-soil is being removed by contract as often per week as necessary, and conveyed to a suitable spot, situate about three miles from the town. The bucket system has taken the place of the cess-pit system. Only in a few cases have cess-pits been allowed to remain in use after inspection by the Medical Officer of Health; (b) the slop-water is conveyed into such drains as are properly paved out and continually flushed with a stream of clean water; (c) the household and other refuse are being removed regularly twice a week by contract.

3. Infectious diseases have not been prevalent during the past year. The Medical Practitioners have only reported one case of Diphtheria, two cases of Enteric Fever, four cases of Scarlatina, and one of Typhoid Fever. Prompt steps have been taken to prevent the spread of infectious diseases and to have sanitary defects remedied.

A suitable Infectious Hospital has been erected, and a Cottage Hospital, called the Victoria Memorial Hospital, is in course of erection,

4. Proper steps have been taken to improve sanitary defects and insanitary drains have been paved out with hard-bricks and cement.

Several people have been prosecuted for allowing accumulation of filth and noxious matter on their premises.

Overcrowding has been guarded against as far as possible, and persons occupying fruit and provision shops as sleeping compartments have been prosecuted.

5. Rats are rather plentiful in this district, but no trouble is being spared to have them exterminated.

6. The District Surgeon is appointed Health Officer. The Council has agreed to pay him at the rate of 7s. 6d. for every inspection and written report rendered by him.

7. Strict attention is being paid to butcheries, bakeries and dairies.

(ii) SOMERSET WEST STRAND (MUNICIPALITY).

1. The water is derived from the Lourens River, collected by filter bed, and is under the control and situated within the area of the Municipality. The water is stored in the Municipal Reservoir, is distributed by pipes, and is perfectly pure.

2. The pail system is in vogue, and night-soil is collected by night-soil vans and deposited on the farm of Mr. W. A. Scholtz, the slop-water and household refuse being also removed by carts and deposited at the same spot.

3. The number of diseases reported has been very small. Everything possible was done for preventing and dealing with outbreaks of all diseases. No Infectious Diseases Hospital accommodation has yet been provided.

4. To remedy sanitary defects the Council have decided to abolish the present system of removal of night-soil, and have adopted the Omega sanitary system (receptive tank system). The contractor is now busy constructing closets for the new system, and it is hoped that the same will be completed before the end of the current year.

Every precaution has been taken to prevent overcrowding of dwellings, and the habitation of any that are unhealthy and dangerous to life.

5. Rats have not been prevalent to any great extent. To exterminate them the Council pay three pence for each rat delivered at the Municipal Office, and have met with every success.

6. There is no Health Officer employed by the Council.

(iii) GORDON'S BAY (VILLAGE MANAGEMENT BOARD).

1. The water-supply is ample and is conveyed from the mountain through filtering tanks.

2. The rate for the removal of night-soil is only being levied, so there is no organised system of disposal as yet in force. From 1st May, 1904, a system will be enforced.

3. There has only been one case of Enteric, and that very slight. Proper precautions were taken as regards same.

4. All precautions are taken as far as lies in the Board's power.

5. There are very few rats about the place, and every precaution is taken to exterminate same.

6. No Medical Officer of Health is employed. The District Surgeon visits the place frequently, and can certify as to the general health of the place.

STEYNSBURG.

(i) STEYNSBURG (MUNICIPALITY).

1. The water used for drinking purposes is obtained from wells, and is led a distance of about 250 yards by galvanized pipes into five tanks on the Market Square. The water is very pure and is controlled by the Municipality. The wells are in the town.

2. This Municipality has tubs, which are removed during the night. Each owner has to report when his tub is full.

Slop-water is removed by the Municipal wagons twice a week, and in some places, like boarding-houses, etc., daily.

Refuse is disposed of in the same way.

3. A case of Syphilis occurred in the location, the hut was disinfected by the Location Inspector, and the patient, a native child, removed to a tent, as there is no hospital.

5. No complaints have been made as to the prevalence of rats.

6. The Municipality has a Sanitary Inspector, but does not employ a Medical Officer of Health.

STEYTLERVILLE.

STEYTLERVILLE (MUNICIPALITY).

1. The water-supply is derived from wells situate on the different properties here--being the drainage of the Groot River which passes the village. The supply has so far been sufficient and adequate, and is practically used for all purposes. Many residences here are also supplied with tanks for collecting rain-water, which is principally used for drinking purposes. The water derived from wells is fairly pure and free from pollution.

2. The system of collection and disposal of night-soil is the dry earth closet and pail system, and is done by the removal of night-soil once every fourteen days, and as often otherwise as may be required. Slops and other household refuse are removed to the depositing place appointed for that purpose.

3. Very few infectious diseases prevailed here during the year. There is no Infectious Diseases Hospital accommodation. The Contagious Diseases Hospital here is under the control of Government.

4. Nothing has been done with regard to this during the past year, as it was not necessary to act.

5. No rats are found here.

6. No Health Officer is employed, he not being required.

STOCKENSTROM.

(i) BALFOUR (VILLAGE MANAGEMENT BOARD).

The general health in this area has been good, and all sanitary arrangements are satisfactory.

(ii) BELLVALE (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from the Kat River and is conveyed in an open furrow,

2. Night-soil, household and other refuse are disposed of in erven in holes at an average distance of 175 yards apart.
3. No infectious disease has occurred.
7. The open water-furrow is kept properly clean.

(iii) BERGMAN'S HOEK (VILLAGE MANAGEMENT BOARD).

1. The water-supply is derived from the Elands River, the source of which is situated on the farm of the late Hon. John Laing, and is not under the control of the Board, being without the area of the Local Authority. The water is collected in a dam and distributed by means of open furrows. The supply is adequate, and the water is pure and sweet, being derived from a source two miles off.

2. There is no organised system of collection and disposal of night-soil and other refuse, as the location is thinly populated, each householder living on an erf, which is equal in extent to a small farm.

3. During the year there were no cases of infectious diseases, and the provision of any Infectious Diseases Hospital accommodation would be superfluous.

4. There are no sanitary defects to be remedied.

5. Rats are not very prevalent and are destroyed by private individuals.

6. No Special Health Officer is employed by the Local Authority, as the District Surgeon is sufficient for the needs of the location.

(iv) BUXTON (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from a river, the source of which is under the control of and situated within the limits of the Local Authority. The water is conveyed from the river in an open furrow and is quite pure.

2. This being a very scattered village there is no system of collection and disposal of night-soil, etc.

3. There has been no infectious disease.

4. There have been no sanitary defects.

5. There are no rats in the district.

6. No Health Officer is employed.

(v) CATHCART VALE (VILLAGE MANAGEMENT BOARD).

Report received too late for publication.

(vi) DAVID SCHEEPERS (VILLAGE MANAGEMENT BOARD).

1. This village adjoins Seymour, being only five minutes' walk from that place. The water-supply is derived from the river which also serves Seymour, and as the latter place is situated higher up the river, pollution is of frequent occurrence from washing, etc. Erfholders higher up the river are in the habit of damming up the water for the purpose of irrigating their lands, and scarcity of water lower down the stream is thus produced. As a result of this inadequate water-supply, fever has already broken out in this locality. Rain water tanks are used in some instances, but the continuous drought has put a stop to this source of supply.

2. Night-soil is deposited at a great distance from dwelling-houses. Slops and refuse are attended to in a proper manner.

3. About ten months ago an outbreak of Small-pox occurred, but was soon stamped out.

4. There are no overcrowded dwellings.

5. Rats are plentiful in this area. Active steps have been taken to exterminate them, but to no effect.

7. A law should be enacted prohibiting persons from blocking up the river which serves as the water-supply for this village. In times of drought, the presence of a dam higher up the river allows very little water to reach this place, and even the drinking water becomes stagnant.

(vii) EBENEZER EAST (VILLAGE MANAGEMENT BOARD).

No report furnished.

(viii) ELANDS RIVER (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from a river and conveyed in open furrows, the source not being under the Board's control. The water is adequate and pure.

2. There is no system of collection and disposal of night-soil, it being scattered on erven.

3. Two outbreaks of infectious disease occurred during the year.

4. There have been no sanitary defects necessitating any action being taken.

5. Rats are not prevalent.

6. The District Surgeon is employed when any outbreak of disease occurs.

(ix) EYRE (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from a river and is conveyed in an open furrow. The supply is fair and under the control of the Local Authority, but the source is outside the Board's area. The water being conveyed in an open furrow is open to pollution.

2. There is no system of collection of night-soil, etc.

3. An outbreak of Small-pox occurred which was dealt with under the directions of the District Surgeon. Two cases only were reported.

4. No action is considered necessary.

5. Rats are prevalent, but not abnormally so. No steps are taken for their extermination.

6. No Health Officer is employed.

(x) HERTZOG (VILLAGE MANAGEMENT BOARD).

1. The water-supply has continued good throughout the past year.

3. One case of Leprosy was reported and has been removed.

(xi) LUSHINGTON (VILLAGE MANAGEMENT BOARD).

Report received too late for publication.

(xii) MAASDORP (VILLAGE MANAGEMENT BOARD).

1 and 2. The water-supply and sanitary arrangements in this area remain the same as previously reported.

3. With regard to infectious disease, during the early part of the year there was an outbreak of Small-pox, nine cases occurring with no deaths. Later in the year there were two cases of Chicken-pox.

5. There are but few rats in this area, no special attempts being made to exterminate them.

(*xiii*) MANCAZANA (VILLAGE MANAGEMENT BOARD).

This area is at present absolutely free from infectious disease. A few cases of Small-pox appeared during the year.

(*xiv*) MENZIES (VILLAGE MANAGEMENT BOARD).

1. The water-supply is usually plentiful and fairly pure. The sources of the main stream are several springs in the adjacent location of Lushington, and those of the other are springs in this location.

The water is distributed by means of open furrows, which are used almost exclusively for irrigation purposes, but are liable to pollution by ducks, pigs, etc.

2. (*a*) Of the thirteen small homesteads, four only have latrines, others use the surrounding veldt but usually at a reasonable distance from their dwellings. This habit is very objectionable, for the excreta must ultimately pass into the open furrows or streams.

(*b*) Slopwater is usually poured upon dung-hills near arable lands.

(*c*) Household and other refuse are burnt.

3. There was one case of Small-pox (a Kafir adult male), who was housed, guarded, and isolated in an open shed from the 22nd January to the 4th February, when he was able to be removed to a lazaretto near Seymour.

At present there is no hospital accommodation for infectious diseases.

4. When the streams are low all bathing and washing of clothes are forbidden, except at a reasonable distance from the banks.

5. Rats have been slightly more prevalent than usual, but are fairly well kept down by means of traps, poison, etc.

6. No Health Officer has ever been appointed or employed.

7. In the interests of the public good a Health Officer should be appointed without delay, as there would then be a proper check upon those whose habits are filthy.

(*xv*) PHILIPTON (VILLAGE MANAGEMENT BOARD).

1 and 2. Sanitary matter in this area are practically the same as when the last report was furnished.

3. There have been no cases of infectious disease in this area, but during the early part of the year there was an epidemic of Pneumonia, and towards the end of the year of bowel complaints, chiefly Diarrhoea.

5. Rats are not prevalent in this area.

6. No Health Officer is employed.

(*xvii*) READSDALE (VILLAGE MANAGEMENT BOARD).

1. The water-supply, which is excellent, is obtained from springs high up in the mountains and forests and runs in open furrows.

2. Night-soil is conveyed to lands.

3. No infectious diseases occurred.

4. Any sanitary defect is attended to by the Board.

5. There are no rats in this area.

6. No Health Officer is employed.

7. The area has been very healthy during the year.

(xvii) SEYMOUR (MUNICIPALITY).

1. There is a plentiful supply of water obtained from the Eland's River by open furrow, a distance of about four miles from the town, where it is received in a reservoir and thence distributed to the inhabitants by open furrow for irrigation purposes. The water is remarkably pure. It was analysed by Government some years ago, and was pronounced to be of first-rate quality and almost equal to the water of the Cape Peninsula, and only required to be filtered before being used for drinking purposes.

2. Cesspools have been abolished and provision has been made for the deposit of night-soil outside the town. Proper places have been set apart for the deposit of household and other refuse.

The sanitation of the town is generally good.

(xviii) UPPER BLINKWATER (VILLAGE MANAGEMENT BOARD).

1. The water-supply is obtained from the river and conveyed in an open furrow. The supply is under the control and in the area of the Local Authority. The water is pure in quality.

2. Nil.

3. One case of Typhoid Fever was reported. The patient recovered and the house was disinfected with Jeyes' Fluid. One case of Small-pox occurred. The patient recovered and the huts were all disinfected with Little's Dip. There is no hospital accommodation.

4. The Board is very strict in seeing that the water-supply is not polluted.

5. There are no rats in this area.

6. No Health Officer is employed.

7. The health of the place has been very satisfactory except during the month of December when a good many people suffered from Dysentery and Diarrhoea.

(xix) UPSHER (VILLAGE MANAGEMENT BOARD).

No infectious disease occurred in this area during the year and sanitary matters are in good order.

(xx) WELLSDALE (VILLAGE MANAGEMENT BOARD).

The health of the people under this Board has been exceptionally good during the year. There have been no deaths and very little sickness, only a few cases of Influenza now and again.

The sanitation is very good.

 STUTTERHEIM.
(i) STUTTERHEIM (MUNICIPALITY).

1 and 2. There is no alteration to record since last report.

3. An outbreak of Small-pox occurred, the necessary steps being taken to prevent its spread. No Infectious Diseases Hospital accommodation has been provided.

4. The matter is now being considered by the Council to have a system of slop removal by cart.

5. Rats are not prevalent.
6. A Health Officer is employed at a salary of £5 5s. per annum.

(ii) EMGWALI (VILLAGE MANAGEMENT BOARD).

No epidemic of infectious or contagious disease visited this area during the year.

There is an excellent water-supply from two streams, one rising within the Reserve and the other outside it, and these are fairly well guarded from any noxious deposits by the Village Management Board. One case of Syphilis occurred, but the patient immediately left the district. The death-rate has been low, and the general health of the Reserve is excellent.

SUTHERLAND.

SUTHERLAND (MUNICIPALITY).

*Report of Dr. R. H. H. HAYDEN, Medical Officer of Health.

1. The water-supply is derived from shallow wells, deep wells, from a surface well and from a kind of spring on the side of an adjoining hill, this is more a percolation from a dam than a spring.

The water from the spring on the hillside is brought to the village in iron pipes and is mostly used for gardening purposes, although some people use it for household purposes.

The shallow wells and deep wells are subject to pollution from soakage from surface and dust blowing into them from having bad covers.

The surface well is situated in the veldt and mostly used by the inhabitants of the location.

2. Night-soil buckets are emptied by private labour engaged by each householder as often as he thinks fit. Slopwater is generally thrown in the yards.

Household and other refuse are collected by householders in heaps or bags until it appears necessary to such persons to have same removed to the veldt.

3. There have been some twelve cases of Diphtheria and seven of Enteric during the year.

Some of the houses where the cases of Diphtheria occurred had guards placed round them to prevent friends visiting and coming in contact with the patients.

The friends of the patients suffering from Enteric were explained the nature of the disease and instructed to burn or bury the excreta of the patients.

There is no Infectious Diseases Hospital in this village.

5. Rats are unknown here, but mice are rather plentiful.

6. A Health Officer is employed by the Local Authority to examine all cases of suspected or supposed infectious and contagious disease, and to advise on matters of public health generally.

SWELLENDAM.

(i) SWELLENDAM (MUNICIPALITY).

1. The water is obtained from springs in the Langeberg Mountains, and is distributed by means of open furrows. The supply is adequate in ordinary times, but in dry seasons the streams are weak; the water is also liable to pollution in these open sluits. The spring and furrows are situated within the area of the Local Authority.

2. There is no system of collection of night-soil, slopwater or household refuse.

3. Infectious diseases have not prevailed to any extent last year and few cases were reported. There is no Infectious Diseases Hospital accommodation. During the above period there were two cases of Whooping Cough, one of Diphtheria, and two of Typhoid Fever.

4. The Overseer and Sanitary Inspector had to inspect and report on any sanitary defect, and men are constantly employed inspecting the water-furrows. In cases where overcrowding was suspected, the dwellings have been visited and inspected.

5. There are no rats in this district.

6. No Health Officer is employed by the Board.

7. As a tender has been accepted for laying the pipes for the local domestic water-supply, it is hoped the work will soon be completed, and thus one source of danger to the public health will be removed.

Arrangements have now been made to carry out a proper system of sanitary removals, and the service will soon commence.

(ii) BARRYDALE (VILLAGE MANAGEMENT BOARD).

1. The water-supply is from the river under the Board's authority, and is distributed by means of open furrows. The supply is adequate and pure.

2. Each occupier is personally responsible for all refuse on his or her premises.

3. No infectious disease has ever prevailed here with the exception of Measles. There is no hospital accommodation.

4. No action has been necessary.

5. We are not troubled at all with rats.

6. No Health Officer has been employed. Lately a medical man has taken up his residence here and it will be an immense boon if the Government could appoint him as Additional District Surgeon with a salary of at least £50 per annum so as to enable the public to retain his services.

(iii) HEIDELBERG (MUNICIPALITY).

1. The water-supply of this village originates from the flow of the Duivenhoks River, which rises in the Langeberg Range and flows in a southerly direction, skirting this village on and forming its western boundary and to which we have a riparian owner's rights, but the intake, which is an ordinary constructed dam or reservoir is situate in the bed of the said river, just about a hundred yards above the boundary line of our commonage on the property of Mr. M. N. Beukes on the east and Mr. A. J. M. Rall on the west, and although it is under our direct control yet it is outside the scope of our right as property owner. This dam or reservoir is about three miles distant from the village, and its water is conveyed from there in an open furrow or conduit to the village, and there likewise distributed in and by open furrows, allotting two hours water through a

4-inch pipe (for apportioning purposes) to each erf of the dimension of 230 by 110 feet, of which there are about 175 in number, this is besides the use and consumption the water supply is subject to for domestic and other purposes, and for which purposes the supply is reasonably adequate, unless under extraordinary circumstances. As to purity or liability to pollution, no doubt is entertained as regards the former, but as regards the latter it is easily understood that the open furrow system suffers and is liable to pollution, considering that the furrow from where it enters the village has to traverse a distance of about 500 or 600 yards as a main furrow besides the off-lets or side furrows counting seven in number, the former, the greater part along the side of streets, while the latter are all on either side of streets. Restrictive regulations are in force to prevent pollution and are strictly enforced, there having been several prosecutions during the last year. The dam or reservoir was washed or partly washed away during the year, during which time the village depended upon the river itself.

2. (a) Night-soil in the majority of cases is collected in proper receptacles, and removed by the owners themselves of a night and buried either on their own property or at the place appointed by the Municipality, but in a good many instances there are w.c. pits or underground receiving wells, the most of which, however, were done away with under Martial Law.

(b) Slopwater in very few instances is collected in casks or some other receptacle, and when occasion requires removed, but in the larger majority of cases it is either thrown away in the yard or near the house from which it is removed or either emptied on to the manure heap, if there is such on the premises, and later on removed as will now be stated under (c).

(c) Household and other refuse are, as a rule, gathered, and either thrown on and mixed with the stable manure heap, which is removed from time to time, as occasion may require, in order to prevent too large an accumulation, or collected in a box or barrel, and likewise removed to the places appointed by the Municipality outside the limits of the village.

3. The only infectious diseases reported were Measles and Diphtheria, of which there were a few cases during the year, and chiefly among the children, the most advisable preventive measures in connection with which were taken, and the School Board was requested to close the school to the other children belonging to the house in which the disease was prevailing. We have no hospital accommodation at all.

4. Any defects which existed in the sanitation were remedied by the best course advisable, and stringent measures were enforced to prevent a repetition, but there were none deserving of special mention, except that slaughtering, which in 1901 was ordered to be done out of the village, is again gradually being performed at the butcher-shops in the village.

5. Rats are not very prevalent within the Local Authority. The Municipality, however, take no steps for their eradication.

6. No Health Officer is employed by the Municipality.

7. There is no other matter relating to health and sanitation worthy of report, except that since the last report, the Regulations framed under "The Public Health Act," have been adopted, as also have the Regulations relating to the "Local Native Location."

(iv) ZUURBRAAK (VILLAGE MANAGEMENT BOARD).

The health and sanitation of this Local Authority is the same as reported last year.

There are no rats in this area.

TARKASTAD.

TARKASTAD (MUNICIPALITY).

* Report of Dr. WM. H. FERGUS, Medical Officer of Health.

1. The source of the water-supply is a spring arising about half a mile from the village and under Municipal control. The water is collected in iron pipes and carried to a large masoned reservoir near the village. The supply for domestic purposes is obtained as it runs from the delivery pipe, that collected in the reservoir is used for the irrigation of gardens. For domestic purposes the supply is adequate and pure, and not liable to pollution. The water used for irrigation is liable to pollution, and should not be used for domestic purposes. A considerable number of houses within the Municipal area are provided with tanks for the collection of rain-water.

2. (a) Night-soil is disposed of by the bucket system, the removal is under Municipal control; it is carted a considerable distance from the village, thrown into trenches and covered with soil. The removal of night-soil ought to be carried out more systematically, and a better pattern of sanitary pail should be provided in place of the ordinary bucket.

(b) and (c) Slop-water, household and other refuse are not removed systematically, nor is their removal under Municipal direction; each householder employs the method most suitable and convenient to himself, either having it carried to the dongas adjoining the village, or having it thrown into the garden or backyard.

3. The Municipal area has been very free from infectious diseases, and the few sporadic cases of Typhoid Fever and Scarlatina that did occur were of a mild type, and were treated at the residence of the patients. No special measures were taken for preventing and dealing with outbreaks. There is no hospital accommodation for infectious diseases, except a lazaretto for Small-pox.

4. No special action was taken to remedy any sanitary defects, and ordinary offences against sanitation have been dealt with by the Municipal Sanitary Officer under the direction of the Health Officer of the town.

5. Rats are not found within the Municipal area, except on occasional importation by train from other parts; these have been destroyed when found.

6. A Health Officer is employed by the Local Authority. His duties generally are to attend to the sanitary condition of the town, and to advise the Local Authority on all matters affecting the public health.

7. The condition of the Native Location requires serious attention from the Local Authority, as no systematic attempt is made to keep it in a sound sanitary state; rubbish is allowed to accumulate, the native latrines are frequently found to be in a filthy state, and the sluits and furrows, adjoining and traversing the location, are the receptacles of all manner of filth, a condition of affairs which constitutes a standing menace to the health of the native population.

TEMBULAND.

(i) CALA (MUNICIPALITY).

1. The water-supply is obtained from a natural spring under control and on property of the Municipality, and is distributed by open furrows.

* Forwarded by Municipality for publication.

The supply, without being impounded, is now considered inadequate. The analysis of the water shows it to be excellent, but by method of distribution it must be considered liable to pollution.

A new scheme is afoot to impound the water by building a reservoir and to distribute by means of pipes.

2. (a) Night-soil.—Same is removed on the pail system, which is done by contract.

(b) No special provision is made for the removal of slop-water.

(c) Refuse is carted away to an appointed place at the householders expense.

3. One case of supposed Scarlatina was reported in the early part of the year. Prompt measures were taken, the patient quarantined, and no further cases were reported.

4. The Overseer has authority to prosecute any person contravening any of the Municipal Bye-laws relative to the health and sanitation.

5. It is seldom a rat is seen in this locality.

6. There is no properly appointed Health Officer by the Municipality. In cases of need one of the local practitioners is appointed for the time being.

(ii) UMTATA (MUNICIPALITY).

1. Umtata has no artificial water-supply at present, the people relying on tanks and the Umtata River. The water is taken from the river in casks drawn by natives. The supply is permanent and unlimited.

2. Each house provides buckets for night-soil, slops, etc., and these are collected and emptied by the Sanitary Contractor at a rate of 1s. 4d. per bucket. The matter thus collected is taken out of town and buried in trenches.

The street gutters are cleaned by the Municipal boys, and such cleanings are used in filling up the old quarries, etc.

3. Beyond cases of Influenza and Whooping Cough no infectious diseases of a dangerous nature occurred (except one case of Enteric which was attended to at the patient's house). There is a hospital on the Mission grounds available for such cases, but no other accommodation has been made for infectious cases, but a move is being made by the Hospital Board for the erection of more commodious premises, for which purpose a large piece of ground has been granted by the Municipal Council.

4. No special steps have been taken to prevent the pollution of the river, except having the banks patrolled by policemen, and prosecuting those who are detected depositing rubbish on the river banks. The Sanitary Inspector reports to the Council monthly on the general condition of the town as to cleanliness, overcrowding, etc.

5. Rats are fairly numerous in the town, but not sufficiently so to require steps being taken by the Council; cats, dogs, or traps are employed by those interested in their extermination.

6. No Health Officer has been appointed, the District Surgeon being considered as such in case of epidemic, unless another appointment be made by the Council.

7. The town has been very free from sickness of any kind, and infectious diseases of a serious nature are practically unknown.

Special attention is paid to hotels, backyards, and butcher's shops, etc., while the location, about three miles out of town, is regularly inspected.

The Council are seriously considering a water scheme for the town, the matter being now in the hands of an expert.

TULBAGH.

(i) TULBAGH (MUNICIPALITY).

1. The township of Tulbagh is supplied with water from the Witzemburg. Portion of this stream traverses by open furrow from its source through the town of Tulbagh, and is used exclusively for irrigation purposes and is quite adequate.

The other portion is conveyed from an intake tank to the reservoir in the township, a distance of three miles, by a two-inch cast-iron pipe. From the reservoir the inhabitants are supplied with excellent water for drinking and domestic purposes.

The Municipality regret to state that this supply has lately, owing to rusting of pipes, greatly diminished, and is consequently not quite sufficient.

The upper portion of the township is now supplied with water from the Malkops River for irrigation purposes, and although the storage reservoir is not quite complete, the inhabitants have already derived great benefit therefrom.

2. The Municipality remove house-refuse once a week regularly from every dwelling, and night-soil at least once a week, which is then properly disposed of.

Slop-water is not collected.

3. No infectious diseases of any kind have prevailed during the last twelve months.

4. The Municipality have just completed a proper set of bye-laws, which will deal effectively with all these matters.

5. Rats are not prevalent in the Municipality.

6. No Health Officer is employed, but the Town Clerk and Street-keeper do the necessary inspections, and, if required, the District Surgeon is employed.

(ii) WOLSELEY (VILLAGE MANAGEMENT BOARD).

1. The water-supply of the township of Wolseley is furnished by a large open furrow, turned out of the Breede River at the entrance of Mitchell's Pass, four miles to the east of Wolseley.

The water is distributed to the inhabitants for drinking and irrigation purposes by three open furrows, turned out from the main furrow at three sluices. The supply is adequate and pure.

2. The Board's Regulation No. 8 states:—"The Board shall provide and set apart a place within the limits of the Board, where filth, night-soil, litter, or rubbish, may be deposited, and notice shall be given from time to time of the place or places so set apart, and no person or persons shall deposit, or cause to be deposited, any filth, night-soil, stable litter, or rubbish, on any street, or public place, or waste ground within the limits of the Board, except such places as the said Board shall set apart for that purpose; and any person or persons casting any filth, night-soil, stable litter, or rubbish into any street or public place, other than mentioned in this Regulation, shall be bound to remove forthwith such filth, night-soil, or rubbish, at his own expense."

3. No infectious diseases have prevailed during the year. No steps have been taken by the Board to prevent such, and no Infectious Diseases Hospital accommodation has been provided.

4. During the year no action was taken by the Board to remedy any sanitary defects. In the year 1901, however, the main water furrow was relayed by the Board to prevent the pollution of the water.

5. As far as the Board is aware no rats are prevalent in the township of Wolseley.

6. No Health Officer is employed by the Board.

UITENHAGE.

UITENHAGE (MUNICIPALITY).

Report delayed.

UNIONDALE.

(i) UNIONDALE (MUNICIPALITY).

1. The water-supply of this town has its source in a kloof known as the Poort; it is derived from springs arising chiefly within Municipal limits; the water is brought down in an open furrow through the Poort and at the upper end of the town is divided into two equal portions for irrigation purposes, the one stream being taken over to private property, not included in the Municipal limits, and the other is taken partly in an open furrow for irrigation purposes in the village, and partly in pipes for domestic purposes. The supply is pure and clean and is plentiful during about eight months of the year, during the remaining four months gardens suffer somewhat, and the want of a stronger supply for irrigation is much felt. The Municipal Council have under discussion a scheme for constructing a large reservoir in the Poort for the purpose of conserving the surplus water, which runs to waste during the winter months, but, owing to the impossibility of getting the owners of private property beyond the Municipal limits, who are entitled to half the stream of water, to co-operate in this scheme, it is likely to be some time before anything definite is done in the matter.

2. The tub system is compulsory in this Municipality, and pails are removed and the contents buried once a week by the Municipal Contractor, and, with the exception that the fees bear rather heavily on the poorer part of the population, the system is working very satisfactorily.

3. No cases of infectious or contagious diseases have been reported to this Council during the past year.

4. No sanitary defects exist, the town being clean and healthy.

5 Rats are unknown in the town and district.

6. Up to the present no permanent Health Officer has been found necessary.

(ii) HAARLEM (VILLAGE MANAGEMENT BOARD).

1. The water-supply is good in general and is conveyed in open furrows to the village from the river which has its source from mountain springs, and is under the control of the Local Authority. It is partly situated without and partly within the area of our authority. The distribution of water is done only by furrows, and the supply is adequate and pure.

2. The system of collection and disposal of night-soil, etc., exists as hitherto.

3. No cases of infectious disease have occurred.

4. All carcasses are conveyed from the village and buried, and filth and noxious matters are buried in gardens. No pollution of whatever kind is allowed in or above the main water-course, which is cleansed twice a year, or as many times as it requires.

5. Rats are not prevalent in this Local Authority, but some are seen from time to time and no steps are taken for their extermination.

6. No Health Officer is employed by the Board.

VICTORIA EAST.

ALICE (MUNICIPALITY).

1. The water is taken from the Chumie River, and is conveyed by open furrow from the Municipal dam. The supply is adequate, and the water is very good, but is liable to pollution, as all open furrows are.

2. Night-soil is removed by contract to proper pits, which are enclosed with a fence. Slops and household refuse are also removed to proper pits by a contractor.

3. During the year there have been four cases of Enteric Fever and one case of Small-pox. One case of Enteric Fever terminated fatally. The health in the town has otherwise been fairly good. There is no Infectious Diseases Hospital.

4. There is no overcrowding of dwellings.

5. Rats have been fairly well exterminated in the town.

6. No Health Officer is employed by the Local Authority.

VICTORIA WEST.

(i) VICTORIA WEST (MUNICIPALITY).

* Report of Dr. T. E. JONES, Medical Officer of Health.

1. The water-supply remains as reported upon last year, though much weakened by the drought.

In my last report, I said that I thought that a good additional supply of water could be procured at Kapokfontein by boring. That has proved to be the case, a supply, estimated at 60,000 gallons per diem, having been tapped; whether this is a permanent supply remains to be seen. It has, however, been running now for four months, and remains as strong as ever, notwithstanding the drought.

I have most earnestly pressed the Council to formulate a scheme to enable the townspeople to have the full benefit of this excellent water. In the Poort there is this beautiful and plentiful supply, whilst the inhabitants are of necessity drinking polluted water from the open furrow.

2. The collection of night-soil is carried out satisfactorily by a contractor under the direction of the Municipal Council.

The system provided for the removal of slop-water is, in my opinion, inadequate and unsatisfactory. There should be separate provision for its removal by means of a tank waggon. At present the night-soil waggon removes the slop-water, if it is placed in buckets in a convenient place.

Household and other refuse is removed by contractor under control of the Municipal Council, and the work is satisfactorily done.

* Forwarded by Municipality for publication.

3. Eleven cases of Enteric Fever have been notified to the Municipal Authority, and in each instance the disposal of secretions and disinfection was carried out under supervision.

For causation one need not look beyond the polluted condition of the water.

During January, February and March seven cases of Diphtheria were notified to the Municipal Council. These were dealt with and the patients satisfactorily isolated and treated with success in their own houses.

Six cases of Small-pox were notified in January. They were isolated in the lazaretto. Two contacts were also isolated in the vicinity. All suspects were vaccinated. These cases were discharged on the 25th January, 1903. No more cases occurred. The source of infection was, no doubt, the outbreak of Small-pox at Victoria Road Station.

An Infectious Diseases Hospital does exist—a small three-roomed cottage. It has, however, been brought into close proximity to inhabited dwellings, owing to the development and extension of the town in its direction, and it has now become totally unsuited for the purpose of an Isolation Hospital for Infectious Disease, and should no longer be used for that purpose.

4. Frequent inspections of tenements suspected of overcrowding have been made, and several cases have been dealt with by the Municipal Council.

Several native dwellings, in a filthy condition, have been dealt with by the Council as they were brought to notice.

Accumulations of filth and noxious matter are attended to regularly.

5. Rats are not prevalent in Victoria West.

6. A Health Officer is employed.

The conditions laid down in connection with the appointment by the Council are as follows:—

Salary £36 per annum.

To report to the Mayor or Town Council all and any cases of a disease of a dangerous nature.

To send in a monthly report of the health and sanitary state of the town, to be laid on the table at the Monthly Meeting of the Council.

7. I frequently drew attention to the objectionable practice of slaughtering which is carried on in Victoria West—an abattoir should be built outside the town, with a proper water-supply, so that efficient and systematic flushing could be carried out.

(ii) VOSBURG (MUNICIPALITY).

* Report of Dr. G. B. WILKINSON, Additional District Surgeon.

1. The water-supply comes from two sources, viz., private wells and that under the control of the Local Authority.

There are numerous private wells ranging in depth from fifteen to thirty-five feet, the water being drawn to the surface by wind-pumps.

These waters are mostly of good quality, but hard.

The erf-water is drawn from a bore-hole, about eighteen feet deep and situated about 300 yards south of the village and led into a dam close to the village, whence the water is laid on to the various erfs twice daily. The water runs in open furrows, and is not at all suitable for drinking purposes, when collected anywhere but at its immediate source.

All this area is under the jurisdiction of the Municipality.

2. The Municipal cart comes on application, and at the payment of a small fee (3d. per bucket), disposes of night-soil in a suitable place. Household refuse, etc., is disposed of in a similar manner to night-soil.

3. The district and village have been singularly free from infectious disease. During the year eight cases of Diphtheria occurred, but were confined to the houses in which they appeared.

One death occurred in a coloured infant.

4. Three houses, unfit for habitation, have been pulled down.

The Police are careful that overcrowding in the Native Location does not occur.

5. Rats are very scarce and are only seen outside the village.

6. There is no official Medical Officer of Health.

VRYBURG.

VRYBURG (MUNICIPALITY).

1. Vryburg Municipality has the control of all water.

A fountain on the south-west side supplies water for drinking purposes, and is delivered by water carts at so much per load.

The surplus water is conserved in a dam and carried in an open furrow, supplying the lower portion of the town with water for irrigation purposes.

Upper Water-furrow.—A good number of erfholders are supplied with water for irrigation from this source, but a great many more would only too gladly take it if there was sufficient water.

This water comes from springs at Swartfontein, a distance of about three miles, conveyed in four-inch pipes for a distance of about two miles, thence by open furrows to the different erven.

The Council has applied to Government to borrow money to bring this water into town in pipes, and build a reservoir on the top side of the town. Estimates have been prepared by a capable Engineer, who says there is about 60,000 gallons available a day, giving about forty gallons a day per person.

2. The collection of night-soil is given out to contract and is very satisfactorily carried out.

Pails are emptied tri-weekly privately, and hotels, boarding-houses and hospital nightly, and deposited in pits outside the town.

Household refuse is removed by private carts under the supervision of the Sanitary Inspector.

3. With the exception of a mild outbreak of Diphtheria, some few months ago, and a case of Typhoid Fever, the town has been in a very healthy condition. Proper measures were taken at the time and thus prevented further cases.

5. Rats are not found anywhere in town or district.

6. No Health Officer is employed by the Municipality.

WILLOWMORE.

WILLOWMORE (MUNICIPALITY).

1. The main source of the water-supply of this town is obtained from wells and bore-holes, the water so obtained being of a slight brackish

taste but adequate. The Municipality has the control of one small dam and two wells. There is no distribution of water in the town.

The disposal of night-soil is carried out on the pail system as has been done for some time past, a Municipal Sanitary Contractor removing all such matter to a duly appointed place on the Commonage, where it is deposited in pits dug for the purpose and covered with soil. After being washed the pails are dipped in McDougall's Dip before being replaced in the closets.

There is no removal of slop-water.

Household and other refuse is collected weekly by the Municipal cart and removed some distance out of and below the level of the town.

3. It is the duty of the Sanitary Inspector to see that there is no accumulation of filth or rubbish on any private property, and, should such be discovered, the occupier of the property on which such accumulation exists is ordered to have it removed at once.

There were two outbreaks of Small-pox during the year, the patients being isolated from the community, wood and iron huts being erected about a mile out of the town; this outbreak was confined to coloured people.

5. There are very few rats, if any, in the town.

6. No Health Officer is appointed.

WODEHOUSE.

(i) DORDRECHT (MUNICIPALITY).

1. The water of the town is supplied from (a) a reservoir of the capacity of 23,000,000 gallons, the water being conveyed into the town by means of pipes and distributed through stand pipes and taps for household and general purposes; and (b) springs, the water being distributed in the same manner as from the reservoir aforesaid for drinking purposes only. The reservoir and springs, before referred to, belong to and are under the control of the Municipality, and are situated within the area of the Municipality. The water-supply is quite adequate, and the water is pure and not liable to pollution.

2. Night-soil and household and other refuse are removed weekly, and slop-water daily—all by contract.

3. The following is (approximately) the extent to which infectious disease has prevailed during the twelve months:—Typhoid, seven cases; Diphtheria, several cases; Scarlet Fever, several cases; Measles, about nine cases; Mumps, about twelve cases.

The Municipal Authorities have made the disinfecting of the town their first object, and all yards, refuse, etc., have been and are being constantly and regularly disinfected.

There is no Infectious Diseases Hospital and none is required.

4. Our sanitary system has been recently re-organized, and is now in a satisfactory and complete condition. The deposit pits are frequently and regularly disinfected. There is no overcrowding of dwellings, and immediate action is taken by the Authorities in any cases which may occur of unhealthy or dangerous habitations.

5. Rats are not abnormally prevalent in the Municipal area, and, in the opinion of our Council, it would be unnecessary to take any steps for the extermination of the same.

6. No Health Officer is appointed by the Municipality.

(ii) INDWE (MUNICIPALITY).

1. A very small supply of water is obtained by the Indwe Company from Indwe River and stand-pipe near the Goods Shed; the principal supply is from rain-water tanks, which is utterly inadequate.

2. The collection of night-soil is by tender under Municipal control. The bucket system is in vogue, and the night-soil is collected by Municipal carts.

3. A considerable number of Enteric cases occurred during the year. No hospital accommodation exists.

4. Careful supervision of town is kept by Municipal employés.

5. There are very few rats in the Municipal area.

6. No Health Officer is employed, but the Additional District Surgeon reports to Council on matters requiring attention.

7. Inadequacy of water-supply is the great difficulty.

WORCESTER.

(i) WORCESTER (MUNICIPALITY).

* Report of Dr. D. HUGO, Medical Officer of Health.

1. Water-supply.—There has been no material change in this respect since my exhaustive report sent last year. Extensive improvements are, however, under urgent consideration, details of which will be found in my Health Report as District Surgeon.

2. The objectionable disposal of excrement still obtains, and it is hoped the sewerage scheme in contemplation will soon be established.

3. Nil.

4. The usual and worst pollution, viz., that brought down by the Hex River stream from the populous valley, has been seriously augmented by the establishment of a Railway Camp at Sandhill on the banks of the river. The matter has been brought to the notice of the Railway Department. For the present the nuisance has been stopped, and it is to be hoped that a recurrence will be strictly prohibited. For further particulars, I beg to refer you to my report as District Surgeon.

(ii) RAWSONVILLE (VILLAGE MANAGEMENT BOARD).

1. The water is conveyed in open furrows from the river. The supply is plentiful and the water pure.

2. There is no means of collection and disposal of night-soil, slop-water, and household and other refuse.

3. No infectious diseases have prevailed during the past year.

4, 5, 6, and 7. None under any of these.

* Forwarded by Municipality for publication.

PART III.

REPORTS OF THE MEDICAL INSPECTORS ON THE WORKING OF PART I. OF "THE CONTAGIOUS DISEASES PREVEN- TION ACT, 1885."

1. CAPE TOWN.

Dr. WM. H. ROSS, Acting Medical Inspector.

The attendance for examinations has been satisfactory, though the number of the registered prostitutes has been considerably reduced, viz., from 82 white and 106 coloured to 10 white and 42 coloured, due, I believe, to the stringency of the new Morality Act, and to many shifts of residence elsewhere. *Au contraire* a fair number of private women (44) have voluntarily applied to the Hospital for treatment, or have been recommended to the Hospital Wards by private practitioners. They have been received and treated under Part II. of the Contagious Diseases Prevention Act, so as to prevent the spread of contagious disease, but they have not been detained against their will. I think it would be judicious to continue the practice, unless they can be proved to have been living in brothels, recognised as such by the Police.

TABLE I.—SHOWING THE OPERATION OF THE CONTAGIOUS DISEASES ACT
DURING THE YEAR 1903.

Number of women on the Register on the 31st December, 1902...	188
Number of fresh cases registered during the year 1903	50
Total number dealt with during the year 1903 under Part I. ...	238
Number of women removed from the Register during the year 1903, shown on Table II.	189
Remaining on Register on 31st December, 1903	49
Voluntary submissions under Section 14	50
Compulsory submissions under Section 10	—
Number of prosecutions under Section 17	8
Total number of women examined	238
Total number of examinations	995
Number of women dealt with under Part II., shown on Table VI.	44

TABLE II.—SHOWING CAUSES OF REMOVAL FROM THE REGISTER DURING THE
YEAR 1903.

Left district	84
Left Service	15
Disappeared	84
Died	6
Total	189

TABLE III.—SHOWING ADMISSIONS TO HOSPITAL, NATURE OF DISEASES,
AND CAUSES OF DEATH.

Remaining on the Register 31st December, 1903	5
Total number of separate admissions, including 44 under Part II., shown on Table VI.	80
Gonorrhœa	29
Secondary Syphilis	12
Tertiary Syphilis	18
Chancroid Eruption of Vulva, etc.	21
Total	80
Total number of individuals admitted:—	
European	4
Coloured	27
Total	31
Daily average number resident	12
Average stay in Hospital per individual (days)	54
Average stay in Hospital per admission (days)	55
Average daily cost per head	7s. 7½d.
Remaining in Hospital on December 31st., 1903	19

Causes of Death of Patients in Hospital.

Phthisis	3
Dropsy	1
Pneumonia	2
Total	6

TABLE IV.—SHOWING THE NUMBER OF WOMEN UNDER EXAMINATION
DURING EACH MONTH SINCE 1892.

Year.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.
January ...	173	132	172	195	223	263	265	305	198	278	263	190
February...	173	138	174	207	249	273	260	311	200	301	269	189
March ...	180	147	180	201	259	294	254	324	217	300	260	114
April ...	186	143	184	207	266	277	247	305	188	268	225	73
May ...	182	138	185	216	260	258	228	229	180	239	234	49
June ...	196	145	182	219	252	268	228	297	179	222	226	40
July ...	171	146	186	217	254	261	236	267	177	239	239	38
August ...	159	150	192	217	256	280	266	239	178	242	251	43
September	171	159	189	215	254	275	255	221	201	265	234	54
October ...	181	164	196	214	264	280	277	171	209	259	236	50
November	175	166	201	215	262	279	295	174	229	260	227	50
December	134	165	202	225	270	273	289	187	267	259	219	52

TABLE V. (WYNBERG).—SHOWING ADMISSIONS TO HOSPITAL FROM WYNBERG DURING THE YEAR 1903, AND THE NATURE OF THE DISEASE.

Remaining in Hospital on 31st December, 1902	—
Total number of separate admissions during the year 1903	6
Gonorrhœa	—
Secondary Syphilis	3
Tertiary Syphilis	—
Chancroid Eruption of Vulva, etc.	3
Total	6
Total number of individuals admitted:—	
European	—
Coloured	6
Total	6
Remaining in Hospital on 31st December, 1903	3

TABLE VI. (PART II.)—SHOWING THE NUMBER OF ADMISSIONS, AND THE NATURE OF THE CASES DEALT WITH UNDER PART II. OF THE CONTAGIOUS DISEASES ACT.

Remaining in Hospital 31st December, 1902	5
Total number of admissions during the year 1903	39
Total	44
European	16
Coloured	28
Total	44
Nature of Diseases for which patients were admitted during the year:—	
Gonorrhœa	9
Secondary Syphilis	9
Tertiary Syphilis	12
Chancroid Eruption of Vulva, etc.	14
Total	44
Discharged during the year 1903	32
Remaining on 31st December, 1903	12
Total	44

2. WYNBERG.

Dr. CLAUDE WRIGHT, Medical Inspector.

The working of the Act for the past year has been marked by a diminution in the number of women examined, viz., 30 for 1903, as compared with 45 for 1902.

The number of diseased has, in an inverse ratio, also risen from 2 out of 45 to 6 out of 30.

The diminution in the number of women examined has been due in a great measure to the working and prosecutions under the Morality Act, which has frightened the women from their usual haunts where they were well known to the Police, and driven them into a more secret method of conducting their business. This prudish legislation is bound to have this effect. Natural passions cannot be expunged, and can only be directed, and the only safe way to minimise danger is to direct it in get-at-able channels, and not drive it into secret corners.

The increase of disease amongst women, as notice in this return, and the consequent increase of disease amongst men, must be the result of this hidden but not expunged practice. The women who drive this trade must be under supervision like any other noxious trade, and to drive the trade into secret channels is not to the benefit of the community at large. The suggestion of some members of the late Legislative Council, which has been so often repeated by them, "that the men should be examined as well as the women," does not hold water for a minute. It is the women who drive the trade and reap the profits, and that very constantly, whereas the men very rarely indulge in comparison. In any noxious trade, the owner, and not the consumer, is the one who should keep his premises clean and be under supervision.

With reference to the number of lusty Kafir men about and Indians—as a matter of political economy—a great mistake is made in not allowing them to be accompanied by their women, many of our wives' domestic troubles with servants are due to this fact. Of this there can be no doubt, and is patent to us whose business carries us round all day, but not so to the official heads of departments, who are bound to a certain daily ramble to and from their offices.

3. SIMON'S TOWN.

Dr. H. CLARKE, Medical Inspector.

During 1903 the Contagious Diseases Prevention Act, 39 of 1885, worked satisfactorily in this district.

Thirty-four women were on the books for periodical examination at the beginning of the year, and during the twelve months 11 were added, making a total of 45 dealt with during the year; 3 women died, 3 disappeared, and 2 got married; 2 of the women only were European, all the others being coloured.

Thirty-eight of the 45 on the Register were cases of voluntary submission, whilst 7 attended under compulsion; 1,128 separate periodical examinations were made with a usual length of interval between of 18 days. There were 37 admissions into hospital, only 4 however for primary Syphilis, and some were re-admitted, 21 women yielding the 37 cases. One woman was admitted four times, three women three times, seven twice, and ten women once.

The behaviour of the women was good, and there were only four prosecutions under Section 4 of the Act, and none under Section 11.

Many of the women are in domestic service owing to the suppression of houses under the Morality Act where they formerly lived. Some time ago the Brook area contained a large number of such houses, but now the demand is so great for girls in this seaport town that although few of

them have fixed professional residences, prostitution is as rife as ever. I am afraid this, the greatest of all social evils, cannot be suppressed by legislation, for in spite of the Act passed a few sessions ago the streets at night are full of young coloured girls, some of whom are professional prostitutes, doing nothing else, others are domestics, and others live with their parents, all carrying on prostitution. The domestic servant class is a particularly dangerous one, for they are always liable to introduce disease into innocent families. I regret to report it is now very difficult to have women compulsorily placed on the list.

The Naval and Military authorities speak highly of the Act, and state it has been very successful in reducing venereal diseases in the Services.

4. EAST LONDON.

Dr. J. BARCROFT ANDERSON, Medical Inspector.

There are not at present the names of any Europeans on the Register. Early in the year there were nine, who upon the enforcing of Act No. 36 of 1902 moved elsewhere. The professional prostitute from Europe appears to be very careful to remain free from disease.

The native women on the Register are from time to time warned by a native detective to attend. He also brings up for voluntary submission any new women whom, from their mode of life, he considers likely to be infected. I believe that but for this Act these native women would receive no treatment when infected.

With respect to the returns. Of the 22 persons found to be free from disease, 21 occurred among the 43 old names on the Register, leaving a balance of 22, of which latter number eleven did not appear for examination at all, having probably left the district. So that out of the old names on the Register two-thirds were found to be free from disease throughout the entire year. The total separate examinations of these people was 223.

On the other hand, from among the nine new names, seven were found to be diseased. Their total examinations were 38.

I may add that, though there were no prosecutions under the Act, out of a total of forty natives examined during the year, thirty-one were at one time or another examined under the Act while undergoing sentence of imprisonment.

I am of opinion that if an honest and energetic "Lay Inspector" were obtained, more Hottentot and European names would be added to the Register.

No persons were, during the past year, dealt with under Part II. of the Act. Such persons as might come under its scope apparently having no difficulty in obtaining treatment in other ways.

5. KING WILLIAM'S TOWN.

Dr. HENRY M. CHUTE, Medical Inspector.

Under Part I. of the Act, 9 women have been dealt with; of these 4 were found to have been affected and were admitted into Hospital.

The number of cases sent to this Hospital for treatment from East London under Part I. has been 23.

Part II. of the Act continues to work satisfactorily. Natives voluntarily avail themselves of the advantage of the Hospital for obtaining treatment, and during the year there have been 62 admissions—28 males, 34 females. Of these 59 were cured, 1 died, 2 remaining December 31, 1903.

The average daily cost of each patient was 4s. 5 1-5d.

6. PORT ELIZABETH.

Dr. J. UPPLEBY, Medical Inspector.

Fifteen hundred and forty-five examinations were made, the number of women being 134—21 European and 113 coloured. Forty-five women were found to be diseased and were duly treated in the Lock Hospital, the average stay being thirty-six and a half days, and the daily average of women in hospital being 10. There were 13 cases of Syphilis and 32 cases of Gonorrhœa. Nine new cases were placed on the Register (voluntary). There were 47 prosecutions under Section 17. The average cost per diem of each patient under treatment was 2s. 3½d.

The internal working of the Hospital has been satisfactory, discipline being well maintained, and the women under treatment willing and cheerful in performing the usual domestic duties

7. UITENHAGE.

Dr. J. UPPLEBY, Medical Inspector.

Ninety-eight examinations were made, 15 women being examined, four of whom were found to be affected, one with Syphilis and three with Gonorrhœa. There were no new cases placed on the Register, and no women have died during the year. There were two prosecutions under Section 17. The average cost per diem of the women found affected, and who were treated in the Port Elizabeth Lock Hospital, was 2s. 3½d.

